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ORIGINAL ARTICLES.

MEDICAL EDUCATION, AND THE LAWS REGULATING THE PRACTICE OF MEDICINE IN TURKEY.

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While the present cry for higher medical education is going on, it may be profitable to consider what is being done in that line in other countries. The condition of medicine in England, France and Germany is well known to most of us; but we are comparatively ignorant of what is being done in Turkey, a country containing an area of about 1,700,000 square miles, and having some 45,000,000 inhabitants.

Its medical practitioners are derived from both native and foreign schools, the latter being represented by both Europeans and Americans. All persons holding foreign diplomas must present them at Constantinople to their respective consulates; where, if from reputable colleges, they are viséd by the minister. They must then present themselves at the Imperial Medical School, and pass a colloquium in French or Turkish, or through an interpreter, before three or more of the professors, satisfying them that they are physicians, and the rightful owners of the diplomas.

The colloquium is short but thorough, and one is treated with the greatest respect. No distinction is shown between American and European graduates, though this is the only place in Europe where such is the case. The short and imperfect courses of many of our medical colleges are only too well known abroad, and as a consequence of this, the average American M.D. has little or no standing with European physicians. The American dentist, on the contrary, stands at the head of his profession all over Europe. The colloquium costs about $35, and a permit is given which authorizes its holder to practice medicine in all parts of the Turkish Dominions.

More is required of Turkish subjects who return from America with medical diplomas, and they are obliged to pass as rigid an examination as the students of the Imperial School. In some cases a year or more must be spent in study before they can pass. The justice of this distinction will be readily seen when we reflect for a moment on the requirements of the respective schools. Legally, no one can practice medicine in Turkey without a diploma or permit from Constantinople; but there, as in most countries, we find more or less bribery, and in many out of the way places the law is disregarded.

In the whole Turkish Empire there are only five institutions in which there is any teaching of medicine, and in only two of these are diplomas given.

The Imperial Medical school of Constantinople was founded in 1833 by the Sultan Mahmoud. It has a six years course, an average class of 450, and, since its foundation, has had some 1,400 graduates. The faculty consists of twenty professors, at the head of which is Dr. Marco Pasha, one well fitted for the important position he holds.

The Cairo School of Medicine is several years older than that of Constantinople, having been founded in 1827, under the reign of Mohammed Ali, at Abu-Zabel, from which place it was removed to Cairo. It has a preparatory course of one year, and a medical course of five years of eight months each. Its classes vary in size from 160 to 200, and its graduates average yearly about twenty. There is a Director, Dr. Issa Pasha Handy, and twenty professors connected with the Cairo School. Its diplomas can be used only in Egyptian territory and, should its graduates wish to practice in any other part of the Turkish Empire, they must first pass a colloquium at Constantinople and obtain a permit as in the case of graduates of foreign colleges.

The Syrian Protestant College at Beirut established a medical department twenty-two years ago, since which time it has graduated 105 students. There are five professors and a President, and its course is four years. The Government permits it to give only a certificate to its graduates stating that they have followed the regular course and have successfully passed their examinations. This, when presented at Constantinople, entitles its holder to an examination at the Imperial Medical College, after passing which he receives his diploma.

There are two other institutions which have tried, but in vain, to get some recognition for

their medical departments from the Government. They are the Central Turkey College at Aintab, and the Jesuit College at Beirut—both, like the Syrian Protestant College, missionary institutions.

All efforts aimed at the Mohammedan religion are aimed at the Turkish Government, hence she justly guards her country against all missionary institutions, but especially medical colleges, for the influence of the medical missionary is greater than any other.

The standard of medical education is set by the Constantinople School, and, as that has a six years course, all of the other colleges have practically the same, the discrepancy in time being made up for in the requirements for matriculation, so a description of one college will do for all.

Through the kindness of Drs. Grant-Bey and Issa Pasha Handy, of Cairo, I have succeeded in getting an accurate account of the Cairo School, so I will confine my remarks to this. A minute description of it by Dr. Grant-Bey will be found in the Arabic medical journal *Ush-Shifa* for 1888.

This school was founded by Dr. Clot, a Frenchman—afterwards the famous Clot-Bey. After him, the position of Director was held successively by Perron, Chaffey-Bey, Griesinger and others. It was in Griesinger's time and at Cairo that Bilharz discovered the parasite bearing his name. At first, the lectures were delivered in French and translated into Arabic for the students, who studied the French language at the same time. The European professors have been gradually supplanted by natives, till now only one remains. At the same time text-books were being written or translated into Arabic, so that at present all teaching is done in that language. Since British influence has been so great in Egypt, a professor of English has been appointed; and each medical student, in addition to his own language, must have a knowledge of either English or French. The building for the School of Medicine is quite new, with all modern conveniences, and attached to this is, 1, a Museum of Pathological Anatomy; 2, Bacteriological Laboratory; 3, Laboratory of Practical Chemistry; 4, Laboratory for Microscopy; 5, Museum of Zoology and Comparative Anatomy; 6, Museum of Mineralogy and Geology; and 7, Collection of Materia Medica.

Near the medical building is a large hospital with an average of 400 patients, the clinics of which students of the second, third and fourth years are required to attend. Those of the fifth year are attached to the Hospital of qasr-el-Ainy, as externes and internes, while preparing for their final examinations.

In connection with the medical school is a school of pharmacy and a school of midwifery; the latter, however, because of social and religious prejudices, is lacking in practical training. The course for each of these schools requires four years for its completion.

All applicants for matriculation must be 16 years of age, and present certificates as to moral character and preliminary training, and they must pass oral and written examinations in Arabic, English or French, history, geography, arithmetic, cosmography, geometry, algebra, physics, chemistry and natural history.

Physics. This is studied in the preparatory year, 96 hours being devoted to didactic, and 192 hours to laboratory work. Chemistry is taught during the preparatory and first years, 96 hours being devoted each year to theoretical and practical work.

Natural history extends through the preparatory and first years, 96 hours being devoted each year to theoretical and practical work.

Physiology is taught the first and second years, during the first there being 96 hours of didactic, and 64 hours of practical work; and during the second year 96 hours of didactic and 192 hours of practical work. Micrography is also studied during the first and second years, there being 64 hours of didactic and 128 hours of practical work each year.

Anatomy extends through the first and second years, there being 96 hours of didactic and 192 hours of practical work each year. Each student is also required to dissect an entire human corpse his first, and the same his second year.

Pathological anatomy is studied during the third year, there being 128 hours of didactic and practical work.

Internal pathology is taught the third and fourth years, 96 hours being devoted each year to the subject, each student being instructed practically in the various modes of diagnosis, and the holding of autopsies. Surgery is taught during the third and fourth years, 96 hours being devoted each year to its study; the third year being chiefly didactic, and the fourth clinical surgery.

Operative surgery is taught the third year, there being 96 hours devoted to its theory and 64 hours to its practice. Each student must perform the operations on the cadaver and on the mannikin.

Materia medica is taught during the third year, 96 hours being devoted to the subject.

Obstetrics is taught during the fourth year, 96 hours being devoted to the didactical part and demonstrations on the mannikin. When cases occur in the hospital the students are required to be present.

Ophthalmology. Ninety-six hours are devoted to this during the fourth year, and are composed of lectures and demonstrations, most of the practical work being done at the hospital clinics.

Hygiene is also studied during the fourth year, having ninety-six hours devoted to it.

Legal medicine is studied the fifth year, 96 hours being spent in theoretical and practical work.

Pharmacology is also studied the fifth year, 96 hours being devoted to didactic and 192 hours to

practical work, the students having to assist in the pharmaceutical course. As yet, no chairs have been created for gynecology and pediatrics; the one being included under surgery, and the other under internal pathology.

Examinations are held at the end of each year on all that has been studied, and four final examinations are held at stated periods. These examinations are oral, written and practical; the student being required to examine and diagnose, in the presence of the examiners, two cases of internal disease, two cases of diseases of the eye, and two specimens of pathological anatomy with the microscope. Should he answer less than two-thirds of all the questions, or should he get zero on any one subject, he will be rejected.

The Board of Examiners for admission to the study of medicine is composed of the professors of the College, with four others appointed by the Minister of Public Instruction.

For the yearly examinations a Board of Examiners is chosen by the Government Medical Department and the Minister of Public Instruction, who act conjointly with the professors of the College. These examiners are chosen from medical men in the employ of the Government and private practitioners, all of whom have equal rights in voting, which insures a rigid and impartial examination.

Does not a system like this, in a country which labors under as many disadvantages as Turkey, put to shame many of our medical institutions in America?

TEMPERAMENT.

Read before the Denver Medical Asssociation, and Arapahoe County Medical Society.

BY S. EDWIN SOLLY, M.D.,
OF COLORADO SPRINGS, COL.

What is it? To most of us it is a certain though ill-defined factor to be reckoned with in our dealings mental or physical with our fellow man.

In our efforts to exert an influence over one another, in religion, in politics, in trade, in education, and in disease, we all feel that this nebulous something has to be taken into account.

It appears as the resultant of various forces in the individual, and gives distinction and point to the character, in short, individuality to the individual. It is shown in the bone, in the outline, the motion, the thought, and the temper. The name implies that it is the tempering and mixing of different characteristics or qualities together, rather would it seem to be the resultant produced from the convergence of several forces and tendencies in the individual.

The ancient writers upon our art endeavored to explain these different underlying forces as due to certain humours, the history and description of their views is too well known for me to recapitulate them here. We moderns have accepted and must still accept much of their nomenclature, but we have rejected their explanations of the causes of the several temperaments, without seriously concerning ourselves with finding new ones. A recent writer in *The Medical Record* (August 4, 1888), in reviewing two essays of Hellurg, upon temperament, says, "Physicians learn, consciously or unconsciously, to recognize temperamental differences, and to suit both manner and medicine to the fact." He further goes on to remark that the best definition has been given by Muller, who essentially describes temperament as "The reaction of the individual to his environment." In the same article Hellurg's tabular definition of temperament is presented, which is founded on the view that it is the varying strength of the reception of an impression and of the reaction of the individual to it, that distinguishes the temperament.

HELLURG'S TABLE.

TEMPERAMENT.	RECEPTION.	REACTION.
Choleric.	Strong.	Strong.
Sanguineous.	Strong.	Feeble.
Melancholic.	Feeble.	Strong.
Lymphatic.	Feeble.	Feeble.

Darwin Hudson (Johnson's Encyclopædia) defines temperament "As a mixture or tempering of the essential elements of the body, whose excess or variable quantity determines the chief characteristics of mind or physique."

What are the essential elements of the body? In the various definitions of temperament that are to be found there is always a reference to some such undefined factors as being at the foundation of the problem of temperament. Before we can build up any reasonable scheme of temperament we must clear off the wrappings and expose the root of the matter, in short we must explain what is meant by the essential elements of the body.

What is the essential quality of living matter? its power of renewal, that is, nutrition. When a portion of elementary living matter, which we term protoplasm, becomes separate and individual, as in an amœba, what is the essential quality of its individuality? It is its capacity to receive an impression from and its power to react to its environment. This quality is exercised through nerve force. It is true that we cannot detect nerve structure, as we know it, in the dawning life of the individual, but though the localized and visible machinery, which we term nerve tissue, is not apparent, the real essential element of nerve force is undoubtedly diffused through the the general mass of the individualized protoplasm, conferring on it the capacity to receive impressions, at least in an elementary manner.

The first reaction of the separate piece of protoplasm to the reception of an impression received from its environment would appear to be the formation of a cell wall, whereby it reacts to external

pressure by hardening itself superficially. Thus it defines its individuality and protects itself in the exercise of its essential function of nutrition, which function consists of the importing of raw material for food and the manufacture of it into the structure of the individual. The first evidences of a nervous system show that it is used to receive and react to impressions made from without; the passing food is drawn in when reflex action is developed by the impression received from without.

Thus we see that a living individual has two essential qualities, nutrition, whereby it lives, and innervation, whereby it individualizes itself, both essential to each other.

The evolution of nutrition is, briefly, thus: Simple absorption and assimilation of food by the whole mass of protoplasm and the general excretion of its waste; then the localization of digestion in a stomach; next the carrying of the digested nutriment to remote parts by lymphatic vessels, then this circulatory process elaborated into a vascular system, with its heart or pump. Then a portion of the clear, white lymph gradually changed into red blood, then the chemical changes producing bodily heat. Thus the circulatory system of nutrition passes from a lymphatic, cold-blooded stage to the warm, red-blooded form of the mammal.

The nervous system beginning in the sympathetic form, next the motor and sensory, up to its highest elaboration in the brain of man, with its power of receiving impressions without bodily contact, by means of thought.

Through innervation comes the power of reception of impressions made upon the individual.

Through nutrition the power of reacting to such impressions, the latter being exhibited immediately through its circulatory system, which in man in its most important form, with respect to the power of reaction, is sanguineous.

The essential difference in reception is in speed, and, therefore, the two chief divisions are into quick and slow. Quick reception may be best called "nervous;" slow, "phlegmatic."

The essential difference in reaction is in strength, therefore the chief division is into strong and weak. Strong reaction may be called "sanguineous;" weak, "lymphatic."

Thus temperaments should be primarily divided into those of quick reception, nervous, and those of slow, phlegmatic, those of strong reaction, sanguineous, and those of weak, lymphatic. But as each individual has both qualities of reception and reaction, so each quality should be expressed in the name of each temperament; therefore taking these four in their main varieties of combination, we have eight different temperaments, the first of the names signifying the most pronounced of the two qualities as exhibited in the temperament.

TEMPERAMENT.	RECEPTION.	REACTION.
1. Nervo-sanguineous.	Quick.	Strong.
2. Nervo-lymphatic.	Quick.	Weak.
3. Phlegmo-sanguineous.	Slow.	Strong.
4. Phlegmo-lymphatic.	Slow.	Weak.
5. Sanguineo-nervous.	Quick.	Strong.
6. Sanguineo-phlegmatic.	Slow.	Strong.
7. Lympho-nervous.	Quick.	Weak.
8. Lympho-phlegmatic.	Weak.	Weak.

No mention has been made of a normal or balanced temperament, as it was styled by Galen, it being an ideal not met with in real life. The nervo-sanguineous, or perhaps rather the sanguineo-nervous, would be nearer to it, that is with respect to quality, though it may not be in regard to quantity. That is, it is normal when the reception of an impression is in proper degree to the cause. For instance, a normally nervous person, when angered with sufficient cause, would not let his passion run riot, but would fit it to the occasion, while the abnormally nervous person is thrown into a passion by a trifle or is over-excited by trifles. The normally sanguineous individual, when affected by disease or injury, responds by vascular excitement and perhaps even inflammation, sufficient to defend his tissue or repair the damage, and no more. The phlegmatic temperament is always behindhand in its work of reception, and is evidently a type of arrested evolution at the stage when the sympathetic and motor systems are well developed and the sensory yet incomplete.

The lymphatic temperament always lags behind in reacting to the stimulus conveyed to it through the nervous system, and may be looked upon as a type of arrested evolution at a stage when the change from white, clear, cold lymph to red, thick, hot blood is going on, but is not fully accomplished.

An individual born with a certain temperament can undoubtedly modify it considerably by force of will and education. Circumstance or disease will also modify, and permanently or temporarily change the relative force of its phenomena. Change of climate often exaggerates or diminishes certain of its manifestations. As physicians the impression made upon temperament by disease is what chiefly concerns us. The reception of the impression made by the invasion of the body by disease is quick or slow, excited or calm, according to whether the individual is of the nervous or phlegmatic, and reaction is strong or weak as he is of the sanguineous or lymphatic temperament. Thus, in the nervo-sanguineous person affected by disease the tendency is to exaggerated nervous excitement and inflammatory change. In fact, the call to arms is quick and loud, and the defense of the citadel of life is vigorous, the rapid circulation promptly expelling the offender by excretion, or, if a lodgment has been gained, building up earthworks of plastic exudation and limiting the mischief; but, like vaulting ambition, nature oft

o'erleaps herself and falls on the other side. Thus the physician may have to moderate the excitement of both nervous and vascular systems, and later, perhaps, to treat the products of over-zealous inflammation. In the nervo-lymphatic, the same excitement of the nervous system is seen, but the excretion of the *materies morbi* is too feebly executed and the defensive lymph changes are too slight to protect, so the disease spreads through the system with much irritation and but little inflammation; the temperature being often higher than the amount of the inflammation appears to warrant.

In the phlegmo-sanguineous individual, on the other hand, the inflammation, which tends to be great, is out of proportion to the rise of temperature and nervous irritation, which are comparatively slight.

In the phlegmo-lymphatic both inflammation and temperature, vascular excitement and nervous irritation, are slight, and fail to reveal the amount of damage done by disease, the progress of which, when once begun, is uninterrupted by the defenses thrown out by inflammation. Knowing the temperamental type of a patient, we can explain and allow for many of the incongruities of pulse, temperature, and nervous phenomena that we meet with.

How are we to diagnose the temperament? Is the individual plethoric or anæmic in appearance? finely chiseled in feature and small-boned, or coarse in outline and large-boned? is he mentally quick or slow in conversation, and nervous or phlegmatic under our examination? is his view of his case exaggerated in its despondency or cheerfulness? Does his history show a tendency to inflammation or to passive congestion? Is he inclined to fever? Does he react quickly to cold? Are his feet usually warm? These, suggestively, are some of the observations and questions which will give us the material for classifying a patient's temperament.

The old classification of temperaments into hot and cold suggests the sanguineous or hot and full-blooded, the lymphatic the cold and thin-blooded. The old forms of dry and moist are snggestive of the nervous and phlegmatic, high nerve tension and dryness being necessarily allied, while moisture and low tension are equally inseparable.

If Hellurg's table and the one herewith presented are compared, the first four temperaments are identical except in name. The nomenclature suggested is somewhat cumbersome, and if it could be lightened without losing the advantage of the name conveying the meaning and the dual nature of the temperament, it would doubtless be better. The chief advantage, if the previous premises are accepted, is that the meaning and the name are linked together, instead of, as in other titles, the meaning being open to various interpretations and merely suggestive of ancient physiological errors and not of the underlying and causative physical facts.

These definitions admit of subdivisions if needed to describe particular temperamental peculiarities, as in the nervous system when the mental, motor or sympathetic systems appear most prominent in excess or deficiency of action; or with respect to special phenomena of nutrition as exhibited in the working of a special organ, as the liver, stomach, etc. All these, however, will be found to ultimately range themselves under the divisions here given. Diatheses which are pathological temperaments, and excess or deficiencies of function dependent upon pathological changes, are not here considered.

In presenting this plea for placing the rational consideration of temperament among the scientific means at our command for forming a diagnosis and conducting a treatment, I desire to do something towards a revival of the study of the physiognomy of the diseased person. In the proud possession of our arms of precision and our more scientific knowledge of disease, we modern Æsculapians have too much neglected what might be deemed the observing of the *tout ensemble* of our cases; a valuable aid to diagnosis which, from their very poverty of resources, our parent leeches cultivated with success, whilst we, through our comparative richness of weapons, have too much neglected.

Therefore let us be ambidextrous, and while in one hand we bear to suffering humanity the fruits of our knowledge of disease, in the other let us carry those gathered from our study of the individual.

EXTRA-UTERINE PREGNANCY. OPERATION. RECOVERY.

Read at the Regular Meeting of the Philadelphia County Medical Society, April 10, 1889.

BY E. P. BERNARDY, M.D.,
OF PHILADELPHIA.

On the morning of November 15, 1888, I was requested to see Mrs. F., who had been taken suddenly with a sharp agonizing pain in the abdomen; the pain came on while in the yard, and it was with the greatest difficulty she was brought to her room. I saw her very shortly after, and found her suffering from shock: pulseless, upper and lower extremities cold, face pinched, complaining of pain in the left side of the pelvis; hot bottles were placed at her sides and feet; ¼ grain of morphine sulphate every fifteen minutes until relieved of pain; same evening pains somewhat easier, but have now assumed a colicky nature; found the menses had been arrested since September 13, 1888. Suspected intra-uterine pregnancy.

November 16. No sleep during the night, col-

icky pains all night, has recovered from the shock. Obtained the following history: Age 34 years. Married twice; four children by the first husband, none by the second; there seems to be a somewhat obscure history of gonorrhœal infection by the first husband; has been married eleven years to the second husband; has never missed her menses until at the time above stated.

The day previous to falling sick she carried up to the third-story room two buckets of coal; went to bed not feeling well; was taken, as stated above, with a sensation of something tearing in the abdomen, followed immediately by agonizing pelvic pain and collapse. Diagnosed ruptured tubal pregnancy.

17th. Vomiting the morphine; changed to rectal suppositories of ext. opii, gr. j, every two or three hours. Warm poultices over abdomen. Vaginal examination revealed a large and sensitive tumor on the left side and back of the uterus, so painful that the most careful examination elicited cries of pain.

From 18th to 25th all acute symptoms abated, the patient recovering her strength. On the 25th show of blood from the vagina, which continued for nearly two weeks; free from pain during the day, but at night is kept awake with colicky pains in the abdomen; pain extending down the left leg.

26th. Again made a careful examination; found a large, extremely sensitive tumor on the left side of uterus, somewhat to the back, throwing the uterus, which was enlarged, forward. Hinted the propriety of a consultation.

December 10. A large mass passed from the vagina, which was attended with expulsive pains, leaving the patient to suppose that she had aborted. It looked like the after-birth, was the remark of the patient. Unfortunately it was thrown away, as of no consequence, and I did not see it. The patient was hardly free of pain; walking or any sudden movement would bring on pain; loss of sleep.

23d. She called at my office, and after examination I informed the patient that her only chance was an operation, and desired further professional advice.

26th. Case examined by Dr. J. Price.

Operation December 29, 1888. Present: Professor Agnew, Drs. Levis, M. Price, Kynett, E. P. Bernardy. Operator, Dr. Joseph Price. The usual abdominal incision was made, and the abdominal cavity opened. Ruptured left tubal pregnancy. The left appendages filled the pelvic basin, the primary rupture having occurred between the folds of the broad ligament, with secondary rupture into the peritoneal cavity. General firm adhesions. The pelvis was emptied of clot; the placenta and membranes coming away in the tube, the right tube was diseased; hydrosalpinx; it was removed. Irrigation and glass drainage. The patient is now entirely well; with the exception of a somewhat prolonged shock following the operation, there was no bad symptom.

The first natural question will be, Why was not the operation performed sooner? For two reasons: First, the patient rallied well from the first shock, there was relief of the acute pain and general improvement of health; the second reason, if I had suggested an operation at the first I would have undoubtedly been discharged. Feeling confident of my diagnosis, I made it my duty to gradually educate my patient up to the point of operation. When it was decided to operate I simply notified the patient she would be operated on within the next twenty-four hours.

The history was a typical one of an extra-uterine; hardly a symptom, as laid down in Parry's book on "Extra-uterine Pregnancy," was lacking, and any mistake in the diagnosis could only have been made through gross negligence.

DR. J. M. BALDY: A great deal has been said in regard to the influence of gonorrhœa in the causation of various affections. I notice that Dr. Bernardy has made it a prominent feature in his case; I would ask if he insinuated that the extra-uterine pregnancy was due to the attack of gonorrhœa?

DR. E. P. BERNARDY: I mentioned gonorrhœa simply as one feature in the history of the case. From the extensive disease in the opposite tube, I think there is reason to believe that the attack of gonorrhœa was at the bottom of the extra-uterine pregnancy.

DR. G. G. DAVIS: The question of the ligature coming away is one that is applicable to general surgery as well as to special abdominal work. There seems to be a tendency to attribute the trouble to the large size of the ligature. That a large knot or a large thread would give trouble where a small one would not is no doubt true, but I do not think it proper to attribute all the bad results to the size of the thread. Where pus follows the application of a large thread, it does not necessarily follow that the thread is the cause of the pus. It is well known that it is extremely difficult to cause pus by placing foreign bodies in healthy structures. If the bodies are infected it can be readily done. In the case referred to by Dr. Price the question might arise whether or not the trouble with the large ligature was due to its being infected, while the small ligature was not. Many years ago I saw Mr. Thomas Smith, in St. Bartholomew's Hospital, use silk to tie arteries. Some would suppurate and others would not. This was in the time of carbolic acid. There can be no question that the more correct are the antiseptic precautions, the greater the proportion of cases in which the silk ligature, whether large or small, will remain harmless and be covered with lymph.

DR. JOSEPH HOFFMAN: In my case of extra-uterine pregnancy I simply found a mass in the pelvis and recognized the importance of its removal. The history agrees closely with that given by Dr. Bernardy, although there was no history of gonorrhœa and no long preceding period of sterility. The case was a terrible one. I never saw such a mass of matted abdominal contents. The tube of the opposite side was so adherent to the intestine that in its separation the bowel broke. The gut was resected and dropped. The patient made an uninterrupted recovery.

DIGITAL DIVULSION OF THE PYLORUS FOR CICATRICIAL STENOSIS.

Read before the American Surgical Association, May 15, 1889.

BY J. M. BARTON, M.D.,
OF PHILADELPHIA.

Digital divulsion of the pylorus for cicatricial stenosis as first practiced by Prof. Loreta, of Bologna, Italy, in 1882, has scarcely received the attention which I think it deserves anywhere except in Italy. The mortality from the twenty-five operations which I have succeeded in collecting is not great, when we consider that every successful case is a patient rescued from certain and by no means distant death, and this mortality is already decreasing.

The cases in which the operation would be of service are not so rare. When searching the journals for records of such operations, I found the reports of the presentation of many specimens of cicatricial stenosis of the pylorus to various pathological societies. My own experience has been limited to two operations. Even the first, though it proved fatal on the fourth day, encouraged me to operate again, as I was fully satisfied that had it been performed earlier, when the patient was stronger, there was no reason why it should not have been successful.

My second case has the following history: Mrs. G., æt. 48 years, a patient of Dr. Adams, of Vineland, N. J., was first seen by me at her home near Vineland, in December, 1888. For convenience of study and operation, I admitted her to Jefferson College Hospital in January, 1889. During 1884, 1885 and 1886, she had suffered from gastric ulcer. She had pain and vomiting immediately after eating, the vomiting occurring as often as six times in the twenty-four hours; she lost greatly in weight and had two severe hæmorrhages. In 1887 all of the symptoms left her, and for the greater part of the year she enjoyed excellent health, weighing in January, 1888, 143 lbs., which was more than she had ever weighed in all her life. During 1888, she became very ill with symptoms of pyloric obstruction, and lost flesh rapidly, weighing after her admission to the hospital (January, 1889) only 93½ lbs. She then vomited but once in twenty-four or forty-eight hours. This occurred when she laid down at night and was not accompanied by nausea. It was usually from 1½ to 2 quarts in quantity and measured nearly, and sometimes quite, as much as all the nourishment taken since the preceding act of vomiting twenty-four hours before. Many articles taken during the day could be recognized; indeed, she stated that she had occasionally been able to recognize articles eaten as long as two weeks before. As she took her meals she felt that the stomach was becoming more and more distended, and when she laid down at night, gravity brought the contents of her stomach into her throat and they were then vomited. Her bowels were obstinately constipated, acting only once in twelve or fourteen days, and then only after frequently repeated large injections; purgatives administered by the mouth producing no effect. She had lately been able to occasionally feel a small tumor, about the size of a hazel nut, 2 inches to the right of the umbilicus and situated quite deeply. Her stomach was greatly enlarged; distended by the carbonic acid gas developed from half of a soda powder, it reached as low as the umbilicus and as far as the small tumor, though we could not say that the tumor was connected with the stomach. The vomited matters separated themselves into the usual three layers, the middle one being quite clear. They were nearly free from undigested food and not offensive; free hydrochloric acid, though searched for, was not found.

The operation was performed in the presence of the class of Jefferson Medical College, February 16, 1889. The surface of the abdomen had been prepared the day before, the mercurial dressings being still on when the patient was brought into the amphitheatre. Her stomach had been washed out on the morning of operation with a solution of biborate of soda. This had been repeated until the fluid returned quite clear. Chloroform was used as the anæsthetic in preference to ether, as being less apt to be followed by vomiting. The hands and instruments having been prepared with antiseptic solutions, I made a median incision through the skin about 4 inches long, terminating at the umbilicus. The peritoneal incision, however, was only 3 inches in length. There was but little bleeding, and it was readily controlled by clamp forceps.

The dilated stomach was found directly beneath the incision. The juncture of the stomach and duodenum, even from the outside, was markedly contracted and irregular on its surface. There were no adhesions and there was no tumor. The tumor was found to be a hard scybalous mass in the ascending colon, which also contained quite a number of smaller masses of hardened fæces. As the wall of the stomach, 3 inches from the pylo-

rus, felt quite healthy, I folded it transversely midway between the greater and lesser curvatures, and with a pair of sharp scissors made an incision between 1½ and 2 inches in length. There was no bleeding requiring attention. I introduced my index finger through the incision and felt the pylorus contracted to about the size of a No. 10 French catheter. Its margins were quite hard and fibrous. As the fingers would not enter, the blades of a small uterine dilator were guided by the finger into the contracted pylorus, which was then readily dilated until it admitted the index finger. With the aid of a pair of œsophageal forceps it was still further dilated until both the index and middle fingers were admitted, the two fingers were then separated about ½ inch, when I ceased, feeling that further effort would probably rupture the mucous membrane. This dilatation gave to the pylorus a circumference of 4½ inches.

The mucous membrane of the stomach at the point of incision was brought together by a continuous silk suture, and the serous coat by a continuous Lembert suture, also of fine silk carried in an ordinary sewing needle. This suture was introduced deeply into the muscular coat in order to obtain a firm hold; even then it tore out at one or two points, requiring an interrupted suture to be used at those places. When the finger was first introduced into the stomach it caused some retching, forcing most of the stomach out of the wound, where it was kept during the subsequent manipulations. After the wound in the stomach was closed the organ was carefully sponged and restored to the abdominal cavity. The abdominal wound was then closed and dressed in the usual manner.

The patient vomited about 4 ozs. of blood half an hour after the operation, but there has been no nausea and no vomiting since. She was nourished exclusively by the rectum until the fourth day. From that time until the fourteenth day she was fed upon peptonized milk and animal broths. After the seventh day she took from 48 to 60 ozs. of liquid nourishment in the twenty-four hours. Some solid food was given on the tenth day, and after the fourteenth day she was fed upon a carefully selected solid diet. On the thirtieth day after operation she was able to eat eggs, mutton chops, oysters, beef, chicken, lamb, potatoes, cream toast, bread and butter, milk and coffee. Her temperature has never been over 99° F. nor under 98° F. since the operation. Her bowels act naturally every day. The abdominal stitches were removed on the ninth day. On February 8, before the operation, she weighed 93½ lbs. March 25, she weighed 110 lbs., April 15, 118 lbs.; and April 27, 122 lbs. She was able to leave the hospital April 10. She had no pain at any time and required no anodynes.

I have succeeded in collecting 25 published operations. Many of these are by Prof. Loreta. I had hoped to have obtained the results in all his cases, but Dr. Peruzzi, his chief assistant, replies to a letter of inquiry that the Professor has performed in all about 30 operations, and that at least 6 more have been performed by other Italian surgeons. They were all successful when the diagnosis was correct. This would made the total number of operations about 43. The 25 operations included in my list were performed on 24 patients, one patient having been operated on twice successfully by Prof. Loreta. From the 25 operations there were 15 recoveries and 10 deaths, making a mortality rate of 40 per cent. Of the 10 deaths, 6 were due to shock, 2 to hæmorrhage, 1 to tetanus and 1 to suppression of urine. The large mortality from shock in an abdominal section performed in from half an hour to an hour, is probably due to the fact that in this, as in most new surgical procedures, the operation is postponed too long. The mortality is already decreasing. Of the first 12 cases reported, 6 recovered and 6 died; while of the last twelve, 9 recovered and 3 died. This mortality can perhaps be still further lessened by earlier diagnosis and operation, and by such methods of operation as are most quickly performed and accompanied by the minimum loss of blood.

Diagnosis.—The diagnosis can be conveniently divided into two parts; 1, to determine the existence of pyloric obstruction, and 2, to differentiate between obstruction caused by cancer and that caused by cicatricial stenosis. But few of the reported cases has such a typical history as the one I have related. The co-existence of dyspeptic symptoms or of some still open ulcers complicated the diagnosis in most of the cases. I should regard as of little value some of the symptoms upon which much stress has been laid. The material vomited in some cases consisted of partly digested food, in some it was wholly undigested and offensive, while in others it consisted of well-elaborated chyme. The character of the material indicates the health and physiological activity of the stomach, but throws little light upon the condition of the pylorus. In some cases sarcinæ were present, but in many they were absent. The same may be said of starch granules, of needles of the fatty acids, of free hydrochloric acid, of pain and of other dyspeptic symptoms, which have usually existed for many years before the symptoms of obstruction occurred.

The following symptoms I would consider of value: 1. A greatly dilated stomach; 2. The vomiting of from one to two quarts of material at one time; 3. The recognition in the vomited matter of articles that have been taken many hours, days or weeks before; 4. When the act of vomiting is performed with great ease, without nausea, and the appetite is good immediately afterwards; 5. Obstinate constipation; 6. The non-effect

OPERATIONS OF DIGITAL DIVULSION OF THE PYLORUS FOR CICATRICIAL STENOSIS.

No.	Operator.	Residence.	Date.	Age.	Sex.	Duration of Disease.	Tumor.	Abdominal Incision.	Result.	Authority.
1	Loreta	Bologna	Sept. 14, 1882	47	Male.	20 years.	Tumor.	Edge ribs.	Cure; 5 mos. after in perfect health	Mem. Acad. Sci., Bologna.
2	"	"	Dec. 22, 1882.	18	Male.	7 "	None.	"	Cure.	Raccog. Med., 1883, p. 147.
3	Gionnni.	Cezena	Feb. 1, 1883		Female.				Death in 12 hours.	Ibid.
4	Loreta	Bologna	March 17, 1883	46	Female.	17 years.		Edge ribs.	Death in 37 hours.	Morg. Iitore. March 30, 1883.
5	Fratilini	Venice	June 9, 1884	34	Female.				Cure?	Lancet, Sept. 1, 1883, p. 376.
6	Loreta	Bologna	March 9, 1885	26	Female.		Tumor.	Median	Cure.	Gaz. d'Osp., 1884, p. 302.
7	"	"	*						Death, shock	Bull. de l'Sci. Med., '85, p. 137.
8	"	"	"						Cure.	
9	"	"	"						Death, shock	Med. News, Phila., 3, 20, 1886.
10	"	"	"						Cure.	
11	McBurney	New York		19	Female.	20 years.	Tumor	Edge ribs.	Death, hemorrhage	Annals Surgery, 1886, p. 372.
12	"	"	July 6, 1885	59	Female.	30 "	Tumor.	"	Death, 30 hours. Suppres'n of urine.	Annals Surgery, 1886, p. 372.
13	Loreta	Bologna	July 6, 1885	19	Female.			Median	Cure.	La Riforma Med., 1886, p. 259.
14	Haggard	England	1886	51	Female.	5 years.	None	Edge ribs.	Cure, well March 30, 1888.	Brit. Med. Jour., Feb. 19, 1887.
15	Loreta	Bologna	March 9, 1886	33	Male.		None		Death, 10th day, hæmorrhage	Acad. Sci., Bologna, 4, 24, '87.
16	Loreta	Philadelphia	March 16, 1886	56	Male.	1 year.	Tumor.	Median	Death, 4th day, exhaustion.	Jour. Am. Med. Ass., '88, p. 548
17	Barton	Philadelphia	May 22, 1887		Female.	7 years.			Death, tetanus, 5th day.	Gaz. d'Osp., Milan, '87, p. 863.
18	Loreta	Bologna	Sept. 14, 1887.	47	Female.	5 "			Cure.	" "
19	"	"	Sept. 27, 1887	20	Female.	10 "			Cure.	" "
20	"	"	Oct. 31, 1887	34	Male.				Cure.	" "
21	Treves.	London.	Dec., 1887		Male.	15 years.	Tumor.	Median	Cure, recontracted	Lancet, Feb. 18, '88, p. 336.
22	Loreta	Bologna	Jan. 30, 1888.	54	Male.	15 "		"	Cure, same patient, reoperation	Gaz. d'Osp., 1888, p. 618.
23	"	"	June 20, 1888.	54	Male.				Cure, letter from Dr. Bull.	" "
24	Bull.	New York.	June 11, 1888.	38	Male.	20 mos.	None	Edge ribs.	Cure, letter from Dr. Bull.	
25	Barton.	Philadelphia	Feb. 16, 1889.	46	Female.	5 years.	Tumor.	Median	Cure.	

* Letter to Dr. Harris stating that to Nov. 30, 1888, he had had 9 cases, of which 5 were cured and 4 died, 3 from shock and 1 from hæmorrhage.

of ordinary purgatives; 7. A preceding history of gastric ulcer of several years' duration and temporary improvement followed by simple obstructive vomiting of well-elaborated chyme many hours after taking food. This typical history occurred but twice among the 24 cases. When the symptoms are obscure great reliance may be placed upon the detection of a decidedly enlarged stomach as this is rare, except as a result of mechanical obstruction of the pylorus.

The mere presence of tumor is almost without value in the differential diagnosis between cancer and stenosis. In the 24 cases tumor was present in 7, absent in 4, not noted in 13. A rapidly growing nodulated tumor low down in the abdomen is probably malignant. A poorly-defined tumor, not increasing in size, high in the abdominal cavity is probably non-malignant. The average duration of cancer of the pylorus is one year (Brinton); the maximum duration three years (Bartholow). The average duration of the gastric symptom in 13 of the 24 cases in which this is noted was eleven years. The history of temporary improvement is against malignant disease. In the latter stages of cancer the obstruction is often removed by ulceration and diarrhœa occurs. In the later stages of ulcer the obstruction increases and the stenosis is more obstinate.

The Abdominal Incision.—In all of the reported cases but two methods of opening the abdomen have been used. One by an incision running from 1 inch below the ensiform cartilage to the extremity of the 9th rib on the right side, a distance of about 6 inches; the other by an incision in the median line between the ensiform cartilage and umbilicus, and from 3 to 6 inches in length. The first method was used by Loreta in his earlier cases, but he now uses the latter exclusively.

The stomach wound should be made far enough from the pylorus to be in healthy tissue. If some inches from the pylorus it will be outside the zone of inflammation following the dilatation. Experimenting upon cadavers I found that separation of my fingers more than an inch caused rupture of the mucous membrane.

The stomach wound has been closed in many ways and all did well. In no case was there the slightest leakage. No case suffered from peritonitis and in none was the stomach wound the cause of death. I would suggest that probably the best method would be a continuous suture of catgut to the mucous membrane and the suture of Appolito to the peritoneum.

Diet.—In some of the reported cases food has been given as early as a few hours after the operation, without injury. I delayed until the fourth day, although I see no reason why food should not be given earlier. Peptonized milk, animal broths, diluted wines, and the yelks of eggs would be the best articles, according to the condition of the stomach prior to operation. Rectal alimentation will be required until sufficient food can be given by the mouth. Solid food has rarely been given before the tenth day and then sparingly.

Permanency of Cure.—Recontraction of the cicatricial tissue would naturally be feared, but Loreta, in January, 1885, nearly three years after his first

operation, writes, "I have now operated on 6 cases. They all have recovered, and all remain well up to the present time." Haggard, in 1888, reports that the case he operated on two years before was "still perfectly well, no vomiting, dilatation of stomach less, and she has recently married." Peruzzi, in his letter to me, March 22, 1889, states that he knows of only one relapse among the 30 cases upon which Prof. Loreta has operated. This patient was re-operated upon, recovered, and remained well.

In one of the fatal cases included in the list the obstruction was valvular, due to irregular contraction of the walls of the stomach. In another case, not included in the list as the stomach was not opened, the valvular obstruction was caused by distortion produced by external adhesions. These were divided and the patient made a good recovery. In another case, not included in the list, the operator recognizing that he had badly ruptured the mucous membrane while stretching the pylorus, immediately performed pylorectomy, with recovery of the patient. In another case the obstruction was caused by an adherent pancreas. The cause of the adhesion was an ulcer starting in the posterior wall of the stomach and penetrating the pancreas. In this case an incision about 2 inches in length was made from stomach to duodenum, passing through the pylorus. The two extremities of the wound were brought in contact and the wound sewed up at right angles to its position when made. When completed it was parallel to the long axis of the body. This patient recovered after a serious illness.

AN INTRODUCTION TO THE STUDY OF PNEUMONIC FEVER.

BY EDWARD F. WELLS, M.D.

SIXTH PAPER.

PREVALENCE—METEOROLOGY.

The relations existing between meteorological conditions and pneumonic fever are of the most interesting nature, and many and various are the rules and laws relating thereto that have been formulated by systematic writers, but the exceptions to them are so numerous and important that they are greatly weakened or rendered entirely nugatory.

It may be affirmed, as a general proposition,[1] that pneumonic fever will be found to prevail to a greater extent than ordinarily, the influence of season and epidemics excepted, when the daily range of temperature,[2] humidity of the atmosphere,[3] velocity of the wind,[4] range of barometer,[5] amount of atmospheric pressure[6] and amount of ozone[7] present in the air are greater than the average, and that it will be less prevalent when opposite conditions prevail. Again, it will be found that an excess of cases will be met with when the range of temperature is low,[8] the barometer falling[9] and the ground water low.[10]

That a sudden and marked fall of the thermometer is apt to be followed by an excessive prevalence of pneumonic fever has always been recognized, but it is not at all clear how an excess of moisture can have, *per se*, any deleterious effects upon the lungs, and the proposition has been controverted by a large number of observers.[11] If, however, as is claimed by many, the air which, *par excellence*, is connected with the prevalences of pneumonic fever is a dry, cold one, the explanation offered by Baker[12] is at least plausible:

"If, as is believed, the air is exhaled from the lungs at nearly a uniform temperature throughout the year, and is saturated, or nearly saturated, with the vapor of water, the cold air of winter must, because of the small quantity of vapor which it contains, take from the lungs and air-passages a much greater quantity of vapor than does the warm, moist air of summer; and thus its drying and irritating effects must be much greater."

In this connection it must be remembered that during the season when pneumonic fever is rife a very large proportion of the population is cooped up in heated rooms and habitually breathe a dessicating atmosphere surcharged with carbonic acid gas.

In every locality certain winds are more likely to be followed by pneumonic fever than others. Those from the North are particularly injurious in New York,[13] Stockholm[14], on the Spanish and Ital-

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[1] To which there are many exceptions.

[2] Biach, Am. Jour. Med. Sci., Jan., 1883, p. 261; Seibert, Am. Jour. Med. Sci., Jan., 1882; Berliner klin. Wochenschr., 1884, S. 294; N.Y. Med. Rec., May 30, 1885, p. 608; Hirsch, Hist. Geog. Path., Bd. ii, S. 38; Huss, Lungenentzündung, Leipzig, 1861, S. 68; Baker, Report Mich. Bd. Health, 1880, p. 445; Frank, Prax. Med. Lipsæ, 1823, Lib. ii, p. 311; Howard, N. C. Med. Jour., 1859 and 1860; DeBordes, Nederl. Weeklb. voor Geneesk., 1855, Nr. 22-23; Rigler, Wiener Med. Wochenschr., 1858, S. 834; *et al.*

[3] Baker, Proc. Mich. St. Bd. Health, Oct. 1, 1886; Seibert, op. cit.; Sanders, Am. Jour. Med. Sci., July, 1882, p. 88; Blodgett, Climatology of the U. S., Phila., 1857; Loomis, Am. Jour. Med. Sci., Jan., 1882; Storer, Sanitarian, Apr. 19, 1883.

[4] Thomas, Handb. d. Kinderkrankh., Bd. iii, S. 597; Baker, op. cit., p. 7; Sturges, Nat. Hist. Pneumonia, p. 156; Huss, op. cit., S. 35; Seibert, op. cit.; Green, Quain's Dic. Med., p. 874; Cruvielhier, Path. Anat.; Hourmann et Dechambre, Arch. Gén. de Méd., T xiii.

[5] Biach, op. cit.; Seibert, op. cit.; Baker, op. cit.; Masson, Am. Jour. Med. Sci., Jan., 1883, p. 261; Sanders, op. cit.

[6] Juergensen, Ziemssen's Handb., Bd. v, S. 17.

[7] Baker, op. cit.; Jones, Dublin Jour. Med. Sci., Feb. 1868; Draper, N. Y. Med. Rec., Sept. 19, 1885, p. 326; Seitz, Catarrh and Influenza, 1865; Masson, Inaug. Dissert., Bern, 1879. That ozone has any influence over the prevalence of the disease is denied by Ireland, Edinb. Med. and Surg. Jour., July, 1862, and Baldwin, Ohio Med. Recorder, Apr. 1878. Lépine, Pneumonie, Wien., 1883, S. 30, says that ozone is not a factor.

[8] Bateman, Diseases of London, 1819, p. 234; Van Bibber, Jour. Am. Med. Assn., July 28, 1888, p. 111; Schützenberger, Gaz. Méd. de Strasb., 1856, No. 2; *et al.*

[9] Seibert, op. cit.; Masson, op. cit.

[10] Purjesz, Wiener Med. Wochenschr., 1884, S. 43; Juergensen, Berliner klin. Wochenschr., 1884, Nr. 17; Morehead, Diseases of India, Vol. ii, p. 308.

[11] Barton, Quoted by LaRoche, Pneumonia, p. 347; Tyndale, Sanitarian, May 31, 1883, p. 342; Hirsch, op. cit., S. 32; Masson, op. cit.

[12] Mich. Bd. Health Rpt., 1880, p. 449.

[13] Seibert, op. cit.

[14] Huss, op. cit.

ian[15] coast, Quito,[16] England,[17] Cayenne,[18] and other places. North-west winds are the most deleterious in the Interior Valley of North America,[19] Germany,[20] Marseilles,[21] etc., and the East wind in the Levant.[22]

Seibert,[23] in analyzing 600 cases, found that the barometer was falling in 461 and rising in 139. It was below the mean in 352. The temperature was below 50° F. in 506. The wind was northerly in 302 and north-westerly in 200, and the velocity more than 15 miles per hour in 406. In 550 the air was cold and moist.

There can be no doubt as to the important rôle played by meteorology in preparing either the soil[24] or the seed—or both—of pneumonic fever, but after examining an immense amount of facts relating to this point I am compelled to confess, with Sturges,[25] that I have been unable to come to any satisfactory conclusions.[26]

CLIMATE.

Climate has always been regarded as being intimately associated with the prevalence of pneumonic fever, although the facts at our disposal do not enable us to indicate with certainty the varieties of climate which are most or least prone to influence the prevalence of the disease.

Upon this subject writers have entertained many and diverse views: Laennec was of the opinion that, in general, pneumonic fever is a disease of cold climates, and this view has been shared by others.[28] Sanders[29] considers it most frequent in warm countries, whilst others maintain that it can not be shown that the disease is absolutely more prevalent in one climate than another.[30]

Although pneumonic fever prevails very extensively upon raw and unprotected coasts and in localities[32] which suffer from marked atmospheric vicissitudes, yet it does not appear that the rigorous climate of polar regions is accompanied by as great a prevalence as milder parts. Thus in Parry's northern expedition the men were sometimes exposed—in emerging from their quarters—to a sudden change of temperature of from 80° to 120° F., yet no cases of the disease occurred.[31] It is possible that a prolonged sojourn in Arctic regions may predispose to this and other pulmonary disorders upon a return to temperate climates.[33]

Ever since Forry[34] first promulgated his theory "that in proportion as the high temperature of summer makes an impression upon the system do the lungs become susceptible to the morbid agency of the opposite season" and attempted to prove that this disease prevails most extensively in warm climates, this view has had many adherents.[35] Examining the facts adduced by Forry, Sanders[36] and others in support of the proposition it must be conceded that they are forcible and appropriate, yet when we cast our eyes over a more extensive field the puzzle becomes more complex—perhaps insoluble.[37] When we see localities having similar climates with widely divergent rates of prevalence, or several places with the same rates presenting opposite climatic conditions, it is evident that climate alone is not the ruling factor in the distribution of pneumonic fever.[38]

SEASON.

It is the custom of writers[39] to say that in the northern hemisphere, pneumonic fever prevails very much more extensively in winter and spring than during the summer and autumn months, and this seems to be the only legitimate conclusion if we consult only mortality reports, but if we look at clinical reports as well we may hesitate to accepting this dictum. The facts are clearly shown in the following tables.[40]

During a series of 24 years there were treated in the Vienna General Hospital 12,104 cases of pneumonic fever, and of these 64 per cent. were admitted during the six cold, and 36 per cent. in the six warm months. Of 395 cases admitted into

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15 Hirsch, op. cit., S. 35.
16 Chisholm, Dis. Tropical Countries, London, 1822.
17 Sturges, op. cit., p. 156.
18 Hirsch, l. c., S. 35.
19 Drake, Dis. Int. Valley N. A., Cin., 1850.
20 Hirsch, l. c.
21 Gibbs, U. S. Naval Rpts., 1881, p. 410.
22 Hirsch, op. cit.
23 Am. Jour. Med. Sci., Jan. 1882.
24 Rokitansky, Path. Anat., Phila., 1855, Vol. iv, p. 75; Seibert, N. Y. Med. Rec., May 30, 1885, p. 608.
25 St. George's Hospital Rpts., Vol. v, 1870. Art. x.
26 On account of the diffuse and contradictory nature of my material its presentation is omitted.
27 Traité de l'Auscultation Méd. Paris, 1819.
28 Chomel, Pneumonie, Leipzig, 1841, S. 312; Annesly, Diseases of India; Copeland, Med. Dic., Vol. ii, p. 891; Lombard, Traité de Climatolog., p. 391.
29 Am. Jour. Med. Sci., July, 1882.
30 Ziemssen, Präger Vierteljahrschr., 1858; Hirsch, Hist. Geog. Path. Erlangen, 1864, Bd. ii, S. 20; Juergensen, Ziemssen's Handb. d. Spec. Path. u. Therap., Bd. v, S. 13; Sturges, Pneumonia, London, 1876, p. 161, *et al.*
For further information consult Eberle, Prac. Med., Phila., 1831, Vol. i, p. 284; Huss, Lungenentzündung. Leipzig, 1861, S. 3; Weller, Züricher Diss., 1854, S. 28; Saville, London Lancet, 1887, Vol. ii, p. 607; Forry, Climate of the U. S., p. 359, Jour. Am. Med. Assn., vol. v, p. 9.

31 In California the disease is noticed oftenest upon the sea-coast and the mountains, where the air is cold and moist, whilst it is extremely infrequent in the warmer interior valleys where extreme vicissitudes of temperature are rare. Tyrrell, Rpt. St. Bd. Health, 1886, p. 66.
32 Parry's Northern Expeditions.
33 See the experiences of the ships "North Star and "Corwin." Rosse, Cruise of the Corwin, Wash., 1883, p. 12.
34 Climate of the U. S., p. 246.
35 See Lee, Copeland's Med. Dic., Vol. ii, p. 890; Drake, Dis. Int. Val. N. A., Vol. ii, p. 852; Flint, Prac. Med., 3d Ed., p. 181; Rosse, op. cit., pp. 12–27; Loomis, Prac. Med., N. Y., 1884; Davis, Prac. Med., Chicago, 1884; Fossangrive, Dic. de Méd., T. xviii.
36 Am. Jour. Med. Sci., July, 1882.
37 See tables 9 to 12.
38 For further information consult, Rochard, Dic. de Med., 1868, T. viii, art. Climate; Feuillet, La Phthisie en Algerie, 1874; Boudin, Geog. Méd., Paris.
39 Hippocrates, Aph., Sec. iii; Aretæus, De Caus. et Sig. Acut. Morb., Lib. i, cap. x; Hirsch, Hist. Geog. Path., Bd. ii, S. 29; Lebert, Handb. d. Prakt. Med., Tüb., 1859, Bd. ii, S. 64; Sturges, Nat. Hist. Pneumonia, p. 160; Morehead, Dis. India, p. 300; Huss, Lungenentzündung, Leipzig, 1801; Wunderlich, Allgem. Path. u. Therap., Bd. iii, S. 304; Ziemssen, Pleuritis und Pneumonie, Berlin, 1862, S. 187; Hamernick, Cholera Epidem., Präg, 1850; Grisolle, Traité de la Pneumonie, Paris, 1841; Roth, Würzburger Med. Zeitschr., 1860; Fox, Reynold's Syst. Med., Phil., 1880, Vol. ii, p. 155; Bamberger, Wiener med. Wochenschr., 1857; Swett, Diseases Chest, N. Y., 1854, p. 80; Janeway, Phila. Med. News, Dec. 8, 1883, p. 634; Williams, Cycl. Prac. Med., Vol. iii; Andral, Clin. Med., Vol. ii; Peacock, St. Thomas' Hospt. Rpts., Vol. v, p. 5; Sibson, Med. Chir. Rev., 1858, p. 23; *et al.*
40 The material for table 13 was obtained from a great number of registration reports, references to each of which would serve no useful purpose.

TABLE XIII.—SHOWING PREVALENCE OF PNEUMONIC FEVER BY MONTHS AND SEASONS.

685,566 fatal cases.

COLD MONTHS.				WARM MONTHS.			
Season.	Month.	Cases.	%	Season.	Month.	Cases.	%
Winter, 234,908 cases 34.2 per ct.	Dec. . . .	65,667	9.6	Summer, 89,731 cases, 13.1 per ct.	June. . .	38,861	5.7
	January.	83,151	12.1		July. . . .	26,059	3.8
	Febr'y. .	86,090	12.5		August .	24,811	3.6
Spring, 245,373 cases 35.9 per ct.	March. .	89,062	13.0	Autumn, 115,554 cases 17 per ct.	Sept. . .	27,183	4.0
	April . .	89,283	13.0		October. .	38,111	5.7
	May. . .	67,028	9.9		Nov. . .	50,260	7.3
Total for Cold Mos. .		480,281	70.0	Total for Warm Mos.		205,285	30.0

TABLE XIV.—SHOWING PREVALENCE OF PNEUMONIC FEVER BY MONTHS AND SEASON.

10,225 cases.

AUTHORITY.	Season.	Winter.			Spring.			Summer.			Autumn.		
	Cases.	1658			3582			2539			2903		
	Per cent.	15.9			33.8			23.6			27.7		
	Month.	Dec.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
	Cases.	532	522	604	739	1363	1380	892	695	852	888	899	1114
	Per ct. Cases.	5.3	5.2	5.4	7.2	13.3	13.3	8.6	6.8	8.2	8.4	8.4	10.9
Augusta Hosp., Berlin[41].	441	15	33	27	38	56	53	40	47	40	41	42	22
Author[42]	498	53	52	54	68	74	57	12	48	48	42	58	58
Baginsky[43]	60	5	6	5	7	7	7	6	8	5	2	5	5
Bamberger[44].	186	14	17	25	17	17	27	10	10	11	10	12	16
Chomel[45]	316	30	37	43	45	57	40	22	8	9	3	7	15
Doubleday[46].	252	38	28	25	41	31	22	15	5	5	11	13	18
Flint[47]	49	5	7	2	13	9	3	3	257	0	1	1	1
Friederich. Garnison[48]	3220	287	301	263	302	422	410	309	255	185	179	211	224
Friedländer[49]	824	81	65	64	80	82	87	46	55	36	74	67	67
Gerhard[50]	40	4	5	4	4	7	6	4	0	3	4	3	2
Grisolle[51]	296	34	25	40	47	62	40	8	13	1	5	8	21
Hermann[52]	396	34	41	31	58	60	57	33	23	14	17	8	20
Huss[53].	2616	216	186	209	243	349	407	281	176	100	126	146	175
Riegel[54]	119	9	26	13	11	13	13	8	5	5	2	2	10
Ten German Garrisons[55]	376	24	27	45	61	47	57	33	23	14	17	8	20
Wachter[56]	36	3	3	3	7	2	1	1	1	0	1	0	3
Wilbrant[57].	196	4	19	21	13	11	12	15	5	4	5	1	12
Ziemssen[58]	528	64	53	62	69	55	45	35	42	24	21	19	39

41 Berichte.
42 Private records.
43 Pneumonie u. Pleuritis, Tübingen, 1880.
44 Wiener med. Wochenschr., 1857, S. 897.
45 Pneumonie, Leipzig, 1841, S. 311.
46 N. Y. Med. Record, March 28, 1885, p. 343.
47 Am. Jour. Med. Sci., January, 1861, p. 25.
48 Pulvermacher, Lungenentzündung, Berlin.
49 Inaug. Diss., Erlangen, 1878, S. 27.
50 Am. Jour. Med. Sci., Vol. xiv.
51 Traité de la Pneumonie, p. 137.
52 Lungenentzündung, S. 6.
53 Lungenentzündung, Leipzig, 1861, S. 67.
54 Wiener med. Wochenschr., 1858, S. 834.
55 Hermann, op. cit.
56 Inaug. Diss., Zürich, 1854, S. 41.
57 Inaug. Diss., Rostock, 1862.
58 Pleuritis u. Pneumonie, Berlin, 1862, S. 157.

TABLE XVI.—SHOWING COMPARATIVE PREVALENCE OF PNEUMONIC FEVER BY MONTHS AND SEASONS.[61]

Season.	Cases	Winter.			Spring.			Summer.			Autumn.		
Month.		Dec.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
Internal Dis. . . .	35,711	1384	1576	1999	2765	3998	3280	4006	6258	5431	2394	1459	1251
Pneumonic Fever.	396	41	31	58	60	57	33	23	14	17	8	20	34
Per cent.	100.0	3.0	2.0	3.0	2.2	1.4	1.0	0.5	.2	.3	.3	1.4	2.8

61 See Hermann, op cit.

TABLE XV.—SHOWING PREVALENCE OF PNEUMONIC FEVER IN ADULTS AND CHILDREN BY MONTHS AND SEASON.

Month and Season.	Ziemssen, 526.				Author, 498.				Combined, 1,024.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
January. .	25	8.2	28	12.6	30	9.4	22	12.3	55	8.8	50	12.4
February .	40	13.1	22	9.9	40	12.4	14	7.9	80	12.8	36	9.0
March . .	54	17.8	15	6.8	48	15.0	20	11.1	102	16.3	35	8.7
April . . .	32	10.5	23	10.3	44	13.9	30	17.0	76	12.2	53	13.2
May	23	7.5	22	9.9	10	3.1	16	8.9	33	5.3	38	9.4
June.	11	3.6	24	10.8	6	1.9	6	3.4	17	2.7	30	7.5
July	18	5.9	24	10.1	7	2.2	7	3.9	24	4.0	31	7.7
August . . .	14	4.6	10	4.5	10	3.1	8	4.5	24	3.8	18	4.5
September	8	2.6	13	5.9	22	6.9	6	3.3	30	4.8	19	4.7
October . .	10	3.2	9	4.0	34	10.6	8	4.5	44	7.0	17	4.2
November.	27	8.9	12	5.4	42	13.1	16	9.0	69	11.0	28	5.0
December.	44	14.4	20	9.0	26	8.1	26	14.5	70	11.2	46	11.4
Winter . .	109	35.8	70	31.5	96	30.1	62	34.9	205	32.9	132	32.9
Spring . .	103	33.8	60	26.7	102	31.9	66	36.9	211	33.8	126	31.4
Summer. .	43	14.1	58	26.1	21	6.3	7	3.9	65	10.3	79	19.7
Autumn. .	45	14.3	34	15.4	98	30.7	30	16.4	143	23.0	64	16.0
Total . .	304	100.0	222	100.0	319	100.0	179	100.0	623	100.0	401	100.0

the Hôtel Dieu from 1831–39, 227 occurred in winter, and 168 in summer. Epidemics have generally occurred in winter and spring.

The inference to be drawn from these statistics is that pneumonic fever is markedly more fatal in winter and spring than during the warmer months, but the material at hand is too meager to statisically settle the point.[59]

The influence of season over the prevalence of the disease varies considerably in different years and localities,[60] due no doubt to local and temporary influence. Race, sex, age, etc., influence slightly, if at all, the seasonal prevalencs of pneumonic fever. The influence of age is shown in table xv.

At certain periods pneumonic fever forms a greater portion of the total morbility than at others as shown in table xvi.

VAGINAL HYSTERECTOMY FOR CANCER.

A CONTRIBUTION TO THE STATISTICS OF THE OPERATION.

BY DOCENT DR. VACLAV RUBESKA,

OF PRAG.

[Translated by ARCHIBALD CHURCH, M.D.]

The justifiability of the above operation is even yet at times the subject of debate, but if the concensus of opinion is to the effect that complete, early removal of cancer in other localities gives the patient the best, if not the only chance for recovery, application of the same conclusion to the uterine variety seems to furnish a sound foundation for hysterectomy. The remarkable experience of Dr. Rubeska in the gynecological clinic of the Bohemian University at Prag, now for the first time published, adds much strength to this position. Brief notes of all his cases, extending over four years, were placed in the writer's hands. Twenty-seven cases of vaginal hysterectomy for cancer without a death from the operation speaks in no uncertain terms and needs no comment.

No peculiar mode of operation was employed excepting that the stumps of the broad ligaments were drawn well into the vagina and stitched to its walls. The reason for this procedure, upon which Dr. Rubeska strongly insists, is that a recurrence of the neoplasm, by extension or otherwise, naturally occurring in these structures, will be, when this step is taken, within the range of observation and the field of subsequent operative treatment. Ovaries and tubes were not removed unless diseased. In the first three cases iodoform gauze was used for drainage, but later the peritoneum was closed and no drainage whatever employed. In other respects the operation did not differ materially from the Czerny–Schroeder method, though usually the uterus was delivered without being inverted. The cases were not selected in any sense of the word, and in one case a radical operation was impossible owing to the extensive infiltration of the surrounding structures. Almost without exception the patients were of the poorest class, making it often impossible to keep in view the subsequent course of events. Antiseptic precautions were carried out in their detail, but the clinic being in a portion of the general hospital, an old building leaving much to be desired from a hygienic point of view, the circumstances were

VAGINAL HYSTERECTOMY FOR CANCER.

Case No.	NAME.	Age.	Location of Growth.	Date of Operation.	CURSUS MORBI.	Condition of Patient July 1, 1888.
1	Teressa V.	48	C. corporis uteri.	Sept. 25, 1884	Quickly recovered from operation	Is still well.
2	Marie S.	35	C. cervicis uteri.	Nov. 2, 1885	Recurrence of disease in three months, and death six months after operation.	
3	Teressa H.	36	C. cervicis uteri.	Nov. 6, 1885	Was discharged well and lost sight of	Unknown.
4	Barbara N.	42	C. corporis uteri.	Nov. 17, 1885	Discharged well and lost sight of.	Unknown.
5	Teressa M.	43	C. cervicis uteri.	Nov. 30, 1885	Discharged well and lost sight of.	Unknown.
6	Anna A.	41	C. portionis vaginalis.	April 2, 1886	Discharged well, but died from recurrence of disease in the vaginal wall at a distance from the cicatrix, which remained intact.	
7	Madalane K.	38	" "	April 9, 1886	Discharged well and lost sight of.	Unknown.
8	Elenora H.	63	C. corporis uteri.	May 15, 1886	Discharged well; died six months later of pneumonia, without recurrence.	
9	Anna F.	47	C. cervicis uteri.	June 6, 1886	Discharged well and lost sight of.	Unknown.
10	Barbara S.	53	C. corporis uteri.	Aug. 9, 1886	Discharged well	Remains well.
11	Alvira N.	54	C. cervicis uteri.	Aug. 18, 1886	A small urethro-vaginal fistula resulted, but closed spontaneously.	Remains well.
12	Frances S.	48	" "	Aug. 26, 1886	Discharged well	Unknown.
13	Rozalie T.	34	C. port. vaginalis.	Nov. 25, 1886	Discharged well	Remains well.
14	Katerina K.	34	C. cervicis uteri.	Dec. 15, 1886	Discharged well	Unknown.
15	Amanda R.	52	" "	Jan. 31, 1887	Discharged well. Died of empyema April 28, 1887. Post-mortem the cicatrix was entirely free from carcinoma	
16	Teressa K.	41	C. port. vaginalis.	March 30, 1887	Discharged well	Unknown.
17	Anna P.	38	" "	May 28, 1887	Discharged well	Unknown.
18	Anna B.	53	" "	June 4, 1887	Discharged well	Unknown.
19	C. R.	34	" "	June 26, 1887	Discharged well. Operated in small country house.	Remains well.
20	Anna S.	41	" "	July 2, 1887	Discharged well	Recurrence of growth.
21	Marie M.	58	" "	July 3, 1887	Thrombosis of crural and uterine veins. Died from recurrence of growth April 21, 1888.	
22	Marie L.	50	" "	July 20, 1887	Discharged well	Remains well.
23	Frances B.	48	" "	Aug. 16, 1887	Operation not radical, as parametrium was widely infiltrated. Left uretro-vaginal fistula.	Recurrence of growth.
24	Teressa F.	56	C. corporis uteri.	Aug. 18, 1887	Discharged well	Remains well.
25	Marie Z.	60	C. port. vaginalis.	Aug. 28, 1887	Discharged well	Remains well.
26	Marie C.	59	C. cervicis uteri.	Feb. 23, 1888	Hæmaturia after operation. Discharged well.	Remains well.
27	Katerina K.	42	" "	April 25, 1888	Discharged well	Remains well.

[59] See Huss, Lungenentzündung, S. 87; see also Folkmann, Inaug. Diss., Erlangen, 1847, S. 9.

[60] See Coolidge, Statis. U. S. Army, 1839-1855.

not the most favorable, and one operation was done in a small country house.

Whenever doubt existed as to the diagnosis, and as a rule, microscopical examination of the growth was made.

Of the seventeen cases treated to July 1, 1888, ten remained well after periods of 46, 23, 23, 18, 13, 12, 11, 11, 4, and 3 months respectively. Three died with recurrent cancer; two presented a recedive on that date; and two had died from other diseases without any recurrence of the growth whatever. (For tabulated list see p. 805.)

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MEDICAL PROGRESS.

VERTIGO OF THE STOMACH CONSIDERED OF TOXIC ORIGIN.—M. BOVET has made two kinds of investigations. First, an examination of the urine of dyspeptics affected with vertigo. Second, an analysis of the gas of the belchings so frequent at a certain stage of digestion with patients afflicted with vertigo. It is necessary to fix precisely the moment when the gaseous products are collected, for their nature differs essentially according as they form a short time after eating or from five to six hours afterwards. If the first is the case nitrogen and carbonic acid are the chief ingredients; if the latter hydrogen sulphide often is added, and sometimes an ingredient of a sulphocyanic nature, which Bovet found again as sulphocyanic acid in the urine; he thinks that this toxic product acts upon the medulla and determines the phenomenon of vertigo. Poisoning with the derivates of cyanide produces vertigo and tingling of the ears, symptoms which are often found in dyspeptic patients. There is, consequently, good reason to believe that these organic poisons which were discovered in excess fourteen times out of the seventeen analyses of urine which Bovet made, and five times in those of the stomach gases, constitute the cause of vertigo.

Does this mean that the cyanide compound, which in its nature would be ethylaceto cyanhydric acid, a substance originating from the reduction by dehydration of ethyldiacetic acid and from the derivates of cyanide in the urine is alone to blame? Bovet does not think so, as other substances equally poisonous were found in the urine, such as oxybutyric acid B, which originates from acetic acid, crotonic acid, diacetic acid, ethylacetic acid, and acetone, and which was discovered in certain conditions of diabetes by Külz and Minkowsky. Lépine (Lyon) even ascribes to it the coma in diabetes. It is, therefore, possible that vertigo of the stomach is due to the presence in the organism of one of these two acids, or perhaps to the presence of some other acid of the same kind, for through Gehrardt's reaction the same red coloring is obtained for all these substances derived for one another. As to the sulphocyanic acids and the ethylaceto cyanhydric acid in the urine of vertigo patients Bovet was able to prove after distillation the mixed reaction of these two substances which, moreover, had a distinct smell of prussic acid. Although making certain reserves regarding the nature proper of the acid found in the urines, or in the alkaline solution in which Bovet collected the gases from the stomach, he thinks that this acid acts by intoxication. For inasmuch as it belongs to the hydrocyanic or butyric series, its toxic power is the same and, consequently, its effects are identical. More investigations will be necessary to elucidate this point.—*La Sémaine Médicale*, No. 18, 1889.

CONTAGIOUS CHARACTER AND TRANFERABILITY OF CANCER BY INOCULATION.—DR. ARNAUDET has published the statistics of a district in La Normandie afflicted with cancer, from which he draws the following conclusions:

1. Cancer prevailed with excessive intensity in this part of La Normandie; there exists consequently a local cause.

2. Clinical results justify the declaration that carcinoma is infectious and may be transmitted from one individual to another.

3. As in typhoid fever, so in cancer, the water is ordinarily the vehicle of the characteristic microbe, in our district probably the cider.

4. All water coming from pools, and all impure water in general should be excluded from the fabrication of cider.

5. Our knowledge of this disease makes it our duty to destroy as far as possible all morbid products of our sick (vomited matter of cancer patients, sputa of patients with phthisis, stools of typhoid patients, etc.) Where a more powerful antiseptic is lacking, boiling water is always obtainable.

Arnaudet makes these observations: The specific microbe has not yet been found, and experiments on animals have not led to any positive results. Experiments on man can neither be excused nor advised, but it is well to remember the case of the famous dermatologist Alibert, an opponent of contagion, who died from cancer after having inoculated himself with the juice of an encephaloid, thus proving the very theory which he wished to disprove.

It seems proven that physicians and surgeons pay a greater tribute than the rest of mankind to this terrible malady with which they have to struggle so often. English journals have reported several observations of direct contagion: a cancer of the penis in a man whose wife had a uterine tumor; specific ulceration of the hand and tumor of the arm-pit in a woman who took care of her mistress, the latter being affected with carcinoma

of the breast, the woman had also been washing the linen of her mistress, etc.

Assuredly more material will be necessary to establish all these ideas beyond a doubt, but already the day may be looked forward to—perhaps it is not distant—when like tuberculosis, cancer will fall from the rank of diatheses to that of a simple local disease with external causes.—*L'Union Médicale*, No. 52, 1889.

On Surgical Intervention in Tubercular Peritonitis.—It has often happened and still happens that after diagnosing an abdominal tumor the abdomen is opened and tubercular peritonitis encountered. However, surgical intervention is sometimes useful in such a case, despite the mistaken diagnosis. M. Cecherelli, of Parma, has tried to ascertain, 1, which are the cases of tubercular peritonitis in which surgical intervention is beneficent; 2, what are the reasons of the usefulness of such intervention. Four patients in his clinic gave him opportunity to study these questions. In two of them, a woman 32 years old, and a boy 11 years of age, who presented an enormous tumefaction of the abdomen, with fever, pains, etc., laparotomy, with extraction of several litres of liquid, followed by rinsing and dressing with iodoform, produced a complete cure. In one of these cases, the second, a relapse after three months enabled him to establish, *de visu*, the process of cure. He had to perform another laparotomy, which showed the existence of a large number of loops and adhesions between the parietal and visceral peritoneum. The third and fourth patients were children, in whom the ascites was inconsiderable and encysted in pockets, which he could open, drain, rinse and clean. All patients recovered, and in all the diagnosis of tubercular peritonitis was confirmed by the examination of the peritoneal fragments and of the liquids which were extracted. He thinks from his experience that laparotomy in peritoneal tuberculosis is especially useful in cases where there is considerable dropsy, the cure following, in Cecherelli's opinion, by the intermediation of an adhesive peritonitis after the laparotomy, with binding new formations which enclose and stifle the tubercles. In cases where these adhesions exist already it is not necessary to produce them by surgical intervention.—*La Sémaine Médicale*, No. 17, 1889.

On the Influence of Tobacco Smoke on Diphtheria.—This question has been discussed in the medical college in Vienna. Supported by the discovery of Tassinari, of Pisa, which proved that the fumes of tobacco obstruct the development of the microbes, Dr. Hayack studied the statistics of the city of Vienna, to see whether cases of diphtheria were less numerous in men, generally smokers, than in women. In the last four years, 1885–1888, the proportion of cases in men and women was 1:2.8; these figures confirmed, therefore, the results obtained by Tassinari. Dr. Unterholzer does not think that tobacco smoke has any influence on the progress of diphtheria for, according to statistics, the mortality of this disease is 4 per cent. less in women than in men. Dr. Neuderœfer accounts for the antibacteric action of tobacco smoke by the presence of pyridine, which is a bactericide. It may be remembered here that in bacteriological laboratories smoking is forbidden, as the smoke impedes the development of the cultures. A conclusive experiment of this kind was made by Israël in Virchow's laboratory.—*L'Union Médicale*, No. 54, 1889.

Antiseptic Power of Salol.—At a recent meeting of the Hunterian Society, Mr. Corner introduced a series of cases illustrative of the antiseptic power of salol (salicylate of phenol) as a dressing for wounds, after the part had been rendered aseptic by a 1 in 20 solution of carbolic acid. He did not claim for it greater power than iodoform, and probably other antiseptics, but it has advantages over some. It possesses a pleasant aromatic odor, can be used freely without fear of irritation or poisoning, is absorbent of moisture, which drying forms a hard but friable covering. It will prevent putrefaction; it will not destroy it when once established. It has been used in increasing frequency for several years at the Poplar Hospital, and with excellent results, in compound fractures and dislocations, also as a dressing in amputations, minor and major, and in compound comminuted and depressed fractures of the skull. The first case shown was a compound comminuted depressed fracture of the frontal bone, in which the bone was elevated and some spicules removed. Afterwards the wound was washed with a solution of carbolic acid (1 in 20), the opening filled with salol, and a drainage-tube inserted. The dressing was undisturbed for fourteen days, remained sweet, and healed on the twenty-sixth day. His temperature remained from the first under 100°. A second case treated in January, 1889, was a compound fracture of the olecranon, head of radius, and humerus, opening the elbow joint, with considerable damage to soft parts, the elbow having been crushed by the passage of a railway engine over it. The olecranon was splintered and drawn up, causing serious tension of skin and necessitating removal of both portions. The antiseptic treatment and dressing were the same as in the previous case, but required changing after four hours and again next day, in consequence of oozing through. The parts were then left untouched for thirty days. The temperature went up the day after the injury, and remained about 101° for three days, 100° for two days, and then fell to normal. Two other cases were shown: one a crushed compound fractured finger,

dressed twenty-one days before, and not exposed since, there having been neither pain nor elevation of temperature; the other was a compound fracture of first phalanx of finger, only dressed at the time of the accident, and left undisturbed for a month, when it was found perfectly healed. It was pointed out that this was the common experience in such cases, and that even if gangrene followed the parts remained sweet.—*Lancet*, May 4, 1889.

CASE OF HYSTERIA MINOR AND OVARIAN PHENOMENA IN A MALE.—DR. SAVILL, of the Paddington Infirmary reports the following case in *The Lancet* of May 11. C. G., æt. 20, who had been a shoeblack and paper-seller, was admitted into the infirmary on Dec. 7, 1888, for granular lids and irregular action of the heart. The heart appeared normal, and there was (?) no valvular lesion. He was pale and anæmic, but presented no feminine qualities, and the organs of generation were well developed. On April 5, when he was being prepared for an application of the mitigated nitrate of silver stick, he was taken with a nervous attack. He complained of a ball rising in his throat, and a stifling feeling and pain in his chest. Then he gasped for breath, the limbs became rigid, he assumed the position of opisthotonos, and slid off the chair on which he had been seated. There were no clonic convulsions, but the sighing respiration, rigidity, and other symptoms lasted for several minutes, when, water being thrown in his face, he recovered.

On search being made for other hysterical symptoms no alteration of sensation could be discovered, but there was very marked tenderness in both inguinal regions. The lightest pressure in either groin was resisted by the patient, and produced a recurrence of the above-described "attack" in a much more accentuated degree, accompanied by violent struggling and cries of "Oh! my heart! Oh! oh! oh!" In addition to being thus provoked, it was ascertained that these "attacks" had lately on one or two occasions occured spontaneously, after a meal; and that the patient was frequently subject to terrifying dreams, out of which he would awake, gasping for breath. The field of vision was not tested, because the patient's eyes had been under atropine.

Remarks by DR. SAVILL.—Instances of this sort of hysterical attack are not frequent in the male subject, and careful inquiry was made with a view to ascertain the cause. Nothing could be discovered in the family history pointing to hereditary predisposition, though it should be borne in mind that the family history of this class is often very deficient, and that it is exceedingly rare to meet with the disease in the male without this kind of predisposition. However, it is quite possible that one or all of three causes were in action in this case. 1. He had begun intercourse with the opposite sex at the early age of 16, and had lately had nocturnal emissions. 2. Both of the patient's eyes had been bandaged, and he had been placed in a dark corner of the ward for a period of seven weeks (Feb. 15 to April 5); and, though he had been subject to occasional "flutterings in the chest" prior to admission, he had only had the severe "attacks" since this treatment had been commenced. It seems to me probable that the introspective state induced by this long absence from the light had some connection with his hysterical condition. 3. In the same ward as this patient is in another, who is an undoubted hystero-epileptic, with whom he has mixed rather freely; and thus the element of contagion or imitation is introduced. Which of these three causes predominated it is difficult to conjecture, but it is probable that they all tended to foster and develop the marked hysterical phenomena exhibited by this patient.

RECONSTRUCTION OF THE BLADDER.—At the recent Surgical Congress at Bologna, DRS. TIZZONI and POGGI showed a dog from which they had extirpated the bladder, and afterwards formed a new one by means of a loop of small intestine. A segment of gut had been removed, the two ends of the divided tube carefully stitched together, and the transplanted portion fixed by one extremity in the position of the neck of the bladder, whilst the other was closed by ligature. The ureters had next been isolated, fixed to the sides of the new bladder, and their lower ends turned into it. The new bladder, possessing a mucous surface lined with cylindrical epithelium, was found to work well when the nervous centres had become accustomed to the altered relations of parts. The operation was done in two sittings; in the first the loop of intestine was isolated, together with its mesentery, emptied of fæcal matter, washed out with carbolized water, and tied at both ends, one of which was fixed in front of the neck of the bladder; in the second, which took place a month later, the ureters were detached from the bladder, the latter organ was removed, the lower end of the intestinal segment was cut through and fixed to the neck of the bladder, and the ureters adapted to the new bladder. For a week or so there was incontinence of urine, then gradually the animal acquired control over the organ, so that it could hold its water for an hour. Several dogs have since been operated on in the same way with success. The dog shown at the meeting passed urine naturally, and showed no sign of incontinence. Drs. Tizzoni and Poggi finally discussed the applicability of this procedure to the human subject.—*British Medical Journal*, May 4, 1889.

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SATURDAY, JUNE 8, 1889.

YELLOW FEVER AND ITS PREVENTION.

At the Fourteenth Annual Meeting of the Arkansas State Medical Society, which was held at Pine Bluff, on May 28, DR. ALFRED NELSON, member of the College of Physicians and Surgeons of the Province of Quebec, and late a member of the State Board of Health of Panama, presented a paper upon the subject of "Yellow Fever." An experience extending over many years at Panama, Colon, Mexico, Cuba and Tampa, renders him specially fitted to write upon this subject. The honor, as being the first to recognize and cultivate the yellow fever germ and to use inoculation as a prophylactic, he accords to Dr. Domingo F. Revie, of Rio Janeiro. In this connection he refers to the faith of Dr. L. Girrard, late Surgeon-in Chief of the Panama Canal Company, in the protective power of inoculation, who inoculated himself and had a mild form of yellow fever which seems to have been followed by perfect immunity from that disease afterwards.

Dr. Nelson predicts that inoculation for yellow fever is destined to take equal rank with that for small-pox, and believes that a new era is at hand in the treatment of this terrible scourge. With reference to its pathology, he looks upon it as a blood disease pure and simple, and that except in the destruction of blood corpuscles there is often an absence of any other marked pathological evidence, death resulting from necræmia. With such prophylactic treatment and a proper quarantine surveillance, the travel and the commerce of the nations, he believes, will be subject to little interruption. When the opportunity permits we shall be glad to place the entire paper before our readers.

IS THERE A SPECIFIC FOR CONSUMPTION!

It would be amusing, were it not so sad, to recount the many remedial measures employed against consumption. Their very number is a commentary upon the powerlessness of man to overcome this terrible foe. The very fact that they are all more or less successful in individual cases, emphasizes the impotence of any one remedy against the disease universally, and makes one doubt the likelihood of a specific ever being discovered. Only the prejudiced or ignorant would deny the incalculable service to humanity of Koch's discovery of the tubercle bacillus, since, by disclosing to the surgeon the real pathology of numerous affections, it has enabled him to deal with them the more successfully. But in the matter of finding a practical solution of the problem, how best to combat pulmonary tuberculosis, has it done much? It enables the physician to recognize the enemy he is fighting at an early stage, and thus renders him material aid. Nay, more! By disclosing the bacillus as the probable cause of the disease, it has pointed out the path that may ultimately lead to the heart of the enemy's citadel. In other words, it has shown that the measures which are to prove curative of phthisis, must be such as will either destroy the bacillus or overcome its deadily influence upon the human organism. More than this cannot be said.

Notwithstanding the unremitting efforts of physicians to find a specific cure for pulmonary tuberculosis, this has not been achieved. For this reason, it may not be time wasted, to glance at some of the means that have been essayed and are now in use.

These may be classified as general and local; the general being such, as it is hoped, will antagonize the constitutional effects of the disease, and by improving nutrition, help the system to limit the local destruction; while the aim of local treatment, is the reverse. It seeks to so modify or circumscribe the changes produced within the lungs, as to ward off the injurious effects upon the system at large that are sure to follow the unchecked progress of the local lesion.

Both of these plans are at times successful, but the best results appear to follow their union. Whatever plan of attack be adopted, or whatever the remedies employed, there should always be a careful hygienic management of each case. As it is assumed that this is understood, and we desire to mention only some of the most promising remedial measures in use, nothing further will be said on this score.

The French are particularly fertile in devising anti-phthisical modes of treatment, and one still giving success, it is said, although not much commented upon in the journals, is the subcutaneous injection of carbolic acid. It is best dissolved in glycerine. Á 2 per cent. solution, and of this ten or fifteen minims are injected once or twice daily at first. The total daily amount thus administered may be gradually increased, without fear of toxic effects, it is asserted, if chemically pure acid be used. The acid is also given by the mouth by some. There is no possibility of saturating the system to such an extent as to destroy the tubercular bacillus which is peculiarly resistent, and hence the beneficial action of carbolic acid must be otherwise explained. This is to be found probably in its well-known power of lessening suppuration and putrefaction. Thus the fever due to absorption of the products of suppuration in the lungs would be lowered, fermentation within the gastro-intestinal tract would be checked, appetite and digestion improved, cough and expectoration diminished, sweating restricted, and consequently strength regained, which are precisely the results claimed for this treatment by M. Dujardin-Beaumetz and others.

Closely allied to the foregoing, and vastly more popular at present, is the internal administration of creasote. Jaccoud attributes to it decided virtue in counteracting the disastrous effects of absorption in the stage of softening; whereas von Brun, Sommerbrodt and others after great experience with the drug, find it most beneficial in the stage of catarrh. It may be given in wine, cod-liver oil emulsion or in capsules. It is advised to begin with a daily dose of ¾ of a minim, which is to be gradually increased until the extreme limit of the stomach's toleration is reached.

Iodoform is likewise employed internally against phthisis, in pill-form, 1 grain being thus administered two or three times a day. Some favorable results have been reported of this agent in conjunction with antipyretics. Great care should be exercised lest intoxication be produced.

Dr. C. T. Williams has experimented with phenyl-propionic acid in twenty cases of consumption of all stages, and with phenyl acetic acid in nineteen cases. The acids were dissolved in alcohol, one part in six, and of this ten to twenty minims were given in distilled water thrice daily. Of the cases treated with the former acid there was general improvement in 65.0 per cent., and improvement in the local manifestations of disease in 25.0 per cent. General improvement followed the use of the phenyl-acetic acid in 68.4 per cent., and local in 63.4 per cent.

These remedies are well borne by the stomach and may be administered for a long time. The phenyl-propionic acid seems to be the more suitable of the two for advanced cases.

Another drug from which excellent results are reported, is tannic acid in large daily amounts, forty to sixty grains. It was first proposed by MM. Arthaud and Raymond in consequence of their having found, by experiments on rabbits, that it lessened their susceptibility to inoculations of tubercular virus. Their observations have been confirmed by Ceccerelli, who found tannin exerted pronounced germicidal action in cases of tuberculosis of the bones and other accessible parts. In accordance with the views of Arthaud and Raymond, De-Viti-Demarco claims to have witnessed excellent results follow its prolonged administration in a number of cases, several of advanced phthisis. If given in moderate doses at first and gradually increased, it is tolerated by the stomach, and even improves appetite and digestion, cough, expectoration and night sweats; so that the medicine is certainly well worth a trial.

Of the effects of cod-liver oil, hyperallimentation, change of climate, etc., nothing need here be said.

Local medication is even more varied, and includes intra-pulmonary injections of solutions of iodine, carbolized camphor and the like, sprays of all possible antiseptic substances, the inhalation of ozone, oxygen and vapors of hydrofleuoric acid, the wearing of respirators charged with divers sedative and antiseptic agents. But of all local measures account in detail can be given of only two. These are menthol and hot dry air. Frænkel and Rosenberg recommend the former by inhalation of its fumes at a tempera-

ture of 40° to 50° C. And in addition, Rosenberg advises intratrachial injections of a 10 per cent. solution in olive oil. To be efficient the Asiatic menthol must be employed.

The latest treatment, the one which seems *à priori* to come the nearest to being a specific, is the prolonged inhalation of air heated to a high degree, 250° C. (482° F.). Some accounts have already appeared in these columns of this measure, and Dr. Weigert's original communication to the *New York Medical Record* can be found in its issue of Dec. 15, 1888, together with a cut of his apparatus. The *rationale* of this treatment is based on the fact, that the tubercle bacillus is hindered in its development by temperatures either above or below that of the human body, 37.5° C. (99.5° F.) If, therefore, very hot air could be respired continuously, the bacilli ought to be destroyed, or at least deprived of their capacity for mischief. This being impossible apparently, Weigert has done the next best thing, viz.: made patients inhale air heated to 212° F. to 482° F. for two or more hours at a time twice or thrice daily. His published results are marvellous and warrant a careful investigation of his method. It commends itself for several reasons, one being that it can be used by the invalid at home. Not only do symptoms improve, but physical signs indicate the actual betterment of the local condition. To further the extended trial of this treatment, it is to be hoped that the instrument makers will place the apparatus on the market at such a price as will bring it within reach of all classes of patients.

THE DRAINAGE BILL.

Few subjects of State legislation have been more important than the Bill which was recently passed by the Legislature of Illinois, popularly known as the "Drainage Bill," and which received the signature of the Governor on the 29th of last month. Its purpose is the building of a ship-canal, which, in connection with the Mississippi river, shall form a great inland water communication between the Lakes and the Gulf of Mexico. Probably its importance to the Nation, and especially to the Mississippi Valley, in a commercial point of view, will hardly be over-estimated by its most sanguine promoters.

As a sanitary measure it has more than local interest and is worthy of a passing notice. Its special importance to the city of Chicago can hardly be over-estimated. With a population numbering nine hundred thousand people, it was becoming a very serious question how properly to dispose of its sewage. The building of a ship-canal solves the whole problem—and, as it is believed, without detriment to other interests. A carefully conducted series of tests and observations has led our sanitary scientists to believe that the volume and velocity of the current will be such as to work its own purification and render it harmless to those who may be located in the vicinity of this new waterway.

With a tunnel projected four miles under the lake for the receiving of water beyond the limit of shore or surface polution, and with such an outlet for its sewage—hardly more in these respects could be desired—and the ship-canal will doubtless prove to be one of the most important sanitary movements of the day.

A BRUTAL MURDER.

On the evening of May 4th, last, DR. P. H. CRONIN, a physician in the active practice of his profession, was called from his home and was driven to an unoccupied house at the Northern limit of Chicago and there murdered in cold blood. He went in answer to a request that he should minister to the needs of a laborer suffering from a severe accident—and in response to what seemed to be a legitimate demand of his profession, he went to his death. The motives which impelled to this foul murder we do not care to discuss, suffice it to say they neither compromised his individual or professional honor. Men may condone the crime of death by duel, perhaps; the assassin may enter a possible plea for leniency, but when in the name of suffering humanity a physician is thus lured from his home and brutally murdered, there are no words descriptive of such an atrocious crime, and there can be no palliation of such guilt.

THE ELECTION OF SECTION OFFICERS.

An old member of the Association, who joined it in 1859, writes to the Editor to say that he voted to change the election of officers of Sections, from the Nominating Committee to the Sections, but in his opinion there were gentlemen at a recent meeting who voted in several Sections, and

he is now sorry he originally supported the present method. The change, he says, was to insure that men specially devoted to the work in certain Sections should be elected by those familiar with the work.

Our understanding is that when the Association voted to change the system of election of the officers of the Sections, it was not contemplated that a member should vote in more than one Section, and the hour for the election of Section officers was intended to be fixed so that all Sections would vote at the same time. As time has progressed, it has become apparent that some safeguards must be thrown around the election of Section officers. It is thought that the most feasible plan is to have a Section register book, and on the day preceding the election that each gentleman intending to vote in a particular Section should be required to register his name.

The idea of Section elections was popular because it was thought the gentlemen in attendance on a particular Section were more likely to select a chairman who took a personal interest in the affairs of the Section than would the Nominating Committee, who were already overburdened with work.

The opinion was correct, but since men are as they are, it is necessary to see that Sections vote according to their real sentiment, and not "as packed." The requirement of registration would have the effect to correct any evil of the kind alleged to exist, and one of the most pleasant features connected with the Association is that, as at present constituted, the machinery for the correction of any real or suspected abuse is always at hand and can be easily applied.

EDITORIAL NOTES.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its Seventeenth Annual Meeting at Brooklyn N. Y., on Oct. 22, 23, 24 and 25, 1889. The Executive Committee have selected the following topics for consideration at said meeting:

1. The Causes and Prevention of Infant Mortality.
2. Railway Sanitation.

(a) Heating and ventilation of railway passenger coaches.

(b) Water-supply, water closets, etc.

(c) Carrying passengers with communicable diseases.

3. Steamship Sanitation.
4. Methods of Scientific Cooking.
5. Yellow Fever.

(a) The unprotected avenues through which yellow fever is liable to be brought into the United States.

(b) The sanitary requirements necessary to render a town or city proof against an epidemic of yellow fever.

(c) The course to be taken by local health authorities upon the outbreak of yellow fever.

6. The Prevention and Restriction of Tuberculosis in Man.
7. Methods of Prevention of Diphtheria, with Results of such Methods.
8. How far should Health Authorities be permitted to apply known preventive Measures for the Control of Diphtheria.
9. Compulsory Vaccination.
10. Sanitation of Asylums, Prisons, Jails, and other Eleemosynary Institutions.

Papers upon miscellaneous sanitary subjects not included in the above list will be received by the Executive Committee, subject to the requirements of the By-Laws.

The Secretary is Dr. Irving A. Watson, of Concord, N. H., to whom all communications should be addressed.

DR. S. P. MOORE, who was Surgeon-General of the Confederate States, died suddenly at his residence, Richmond, Va., on the 31st ult., of congestion of the lungs.

THE NEW HAMPSHIRE MEDICAL SOCIETY will hold its ninety-eighth annual meeting in Concord on June 17 and 18. The Councillors' meeting will be on Monday evening, June 17, at the hall of the G. A. R., at 7:30 P.M.

THE NEWPORT CITY COUNCIL has appropriated $300 for the entertainment of the American Medical Association.

THE MISSOURI PACIFIC RAILWAY HOSPITAL at Independence will be removed to Kansas City, where it is the intention of the road to erect a $40,000 building.

THE STAFF OF THE JOHNS HOPKINS HOSPITAL.—Dr. Wm. Osler has been appointed physician-in-chief; Dr. W. H. Welch, pathologist; Dr. W. S. Halstead, chief of dispensary; Dr. H. A. Lafleur, resident house physician; Drs. Harry

Taulmin and G. E. Clark, assistant house surgeons; Drs. Alan P. Smith, James Carey Thomas, Isaac E. Atkinson, S. C. Chew, Frank Donaldson, W. T. Howard, C. Johnston, T. S. Latimer, F. T. Miles, G. W. Miltenberger, L. McLane Tiffany, and H. P. C. Wilson, consulting physicians and surgeons.

DURING the past year the Pennsylvania Hospital treated 2,363 cases in its wards, 4,409 accident cases, and 7,616 out-patients.

BEQUESTS.—It is announced that the late Mrs. Sargeant, daughter of Dr. Oliver Wendell Holmes, has bequeathed to Harvard College $10,000 as a memorial to her father, the income to be applied for the use of the anatomical department; $25,000 for the general purposes of Harvard University; $5,000 to the Massachusetts General Hospital; and in the event of her brother, Judge Holmes, leaving no issue, a further sum of $25,000 to the Boston Medical Library Association.

A SCHOOL OF HYGIENE has been established at Naples.

PROF. CARL VOGT, the eminent biologist of Geneva, celebrated the fiftieth anniversary of his graduation as Doctor of Medicine on May 19.

PROF. TOMMASO VIRNICCHI, of Naples, one of the pioneers of modern surgery in Italy, died recently at the age of 64.

FATHER DAMIEN, the well-known Belgian priest, who labored so patiently for sixteen years in the leper colony of Molokai, in the Sandwich Islands, succumbed to the disease on April 10.

GALVANI ON ELECTRICITY.—Signor Dall' Olio, the assessor, recently paid a visit to the Communal Library at Bologna, Italy, and in the course of his search came on a book-case containing a number of volumes which had not been classified. Among them was found a hitherto unknown treatise by Galvani, on electricity.

M. PASTEUR will deliver the Croonian Lecture on the 23d inst.

MEDICAL EDUCATION IN TURKEY.—The Sultan has granted a subsidy of 500,000 piastres for the erection of a new clinical building and laboratories in connection with the Medical School at Constantinople.

BRITISH MEDICAL ASSOCIATION.—The fifty-seventh annual meeting of the British Medical Association will be held at Leeds on August 13, 14, 15 and 16, 1889. The president-elect is Mr. C. G. Wheelhouse, F.R.C.S. The address in Medicine will be by J. Hughlings Jackson, M.D., F.R.S.; the address in Surgery by T. Pridgin Teale, M.B., F.R.C.S., F.R.S.; and the address in Psychology by Sir J. Crichton Browne, M.D., LL.D., F.R.S.

THE GERMAN DERMATOLOGICAL SOCIETY holds its first congress at Prague during the coming week.

CONSUMPTION IN THE GERMAN ARMY is greatly dreaded by the authorities since the recent Parisian Medical Congress pronounced that the disease was contagious. Accordingly, the German War Minister has decided that the chest of every soldier must be measured once a month. If the chest does not reach a certain breadth, and does not develop with drill and athletic exercises, the soldier will be disqualified as predisposed to consumption, and likely to infect his comrades.

SOCIETY PROCEEDINGS.

The American Surgical Association.

Annual Meeting, held in the New Army Medical Museum, Washington, May 14, 15, and 16, 1889.

(*Continued from page 787.*)

WEDNESDAY—MORNING SESSION.

DR. J. COLLINS WARREN, of Boston, read a paper on

THE EARLY DIAGNOSIS OF MORBID GROWTHS.

Reference was first made to the great desirability of some means of making an early diagnosis in cases of possible malignant disease. The attempt to make a microscopical examination of morbid growths before their removal dates back to the earliest period of microscopical histology. The pain and danger of inflammation attending the methods adopted led to their abandonment. Antiseptic surgery, however, now enables us to perform such an operation almost with absolute certainty of absence of inflammation. Local anæsthesia with ether spray or cocaine renders the exploration free from pain. The instrument which the author employs consists of a small canula, sharpened at the end. The calibre of the instrument varies from 2 to 5 millimetres. The in-

strument is used by gently rotating the canula between the fingers. After the instrument has penetrated the tumor to the desired depth, it is withdrawn a short distance, and then entered obliquely so as to cut off the column of tissue. The piece removed may be as large as 5 mm. in diameter and 3 cm. in length, or even larger. The fragment can be at once examined by means of freezing microtome or placed in alcohol and hardened. The operation can readily be performed at the physician's office and immediate diagnosis made. Several cases were reported illustrating the information obtained by the use of the canula. The instrument has been used in over 100 cases, with little or no discomfort to the patient and with satisfactory results. It has been used in abdominal tumors. It has been used in one or two growths involving the abdominal parietes and peritoneum, but not in deep-seated organs. The object of the author in bringing the results of his observations before the Association, was to show that modern improvements have made an old and discarded method not only practicable, but a valuable addition to our means of surgical diagnosis.

DR. F. S. DENNIS, of New York: I wish to protest against reliance upon this instrument in the diagnosis of malignant disease. I have never found pathologists willing to base a diagnosis of malignant disease upon the shreds of tissue removed by such instruments. More reliance is to be placed upon the clinical features than upon the microscopical appearances. Among these are age, situation of the tumor, the macroscopic appearance, pain, cachexia, lymphatic enlargement, hereditary influence, and finally the use of the harpoon. While the harpoon or canula is a useful adjuvant, we cannot rely upon it absolutely in making the diagnosis.

DR. P. S. CONNER, of Cincinnati: I think that there is nothing more definitely settled than the difficulty of relying absolutely upon the microscopical examination in cases of supposed malignant disease. It is a confirmatory testimony of great value. In the instrument presented we have an additional aid to our means of diagnosis. While the points presented by Dr. Dennis are valuable, they do not aid much in the early diagnosis.

DR. R. A. KINLOCH, of Charleston, N. C.: It is a well established surgical principle that all tumors should be removed, so that the early diagnosis is perhaps not so essential. The question that arises is whether it would not be better to remove the tumor and make the diagnosis of its nature afterwards.

DR. W. H. CARMALT, of New Haven: In carcinoma and sarcoma the clinical features are, to my mind, a great deal more important than anything we can obtain from the microscope. Microscopical examination of different parts of the same tumor may present different appearances. Another point in regard to the use of the canula is the danger that the irritation excited by the instrument may convert a benign tumor into a malignant growth.

DR. WM. H. RICHARDSON, of Boston: I have seen this instrument used in many cases without bad effect, and the microscopists consider that they derive valuable information from examination of the plugs of tissue removed. We cannot make a correct diagnosis in the earliest stages of malignant disease from the clinical evidence alone, and it seems to me that in the early diagnosis this instrument affords valuable aid.

DR. L. MCLANE TIFFANY, of Baltimore, read a paper on

FREE DIVISION OF THE CAPSULE OF THE KIDNEY FOR THE RELIEF OF NEPHRALGIA.

Four years ago the author had suggested the use of incision of the capsule of the kidney in the treatment of nephralgia. The patient, a woman æt. 49, white, married. Had had gonorrhœa and syphilis. She had had abscess of the pelvis opening by the vagina, the discharge continuing for two years. Three years ago she experienced, in the right loin, sudden severe pain, lasting for a moment. It was supposed to be due to the passage of a kidney stone. The attacks recurred at irregular intervals, the periods becoming progressively shorter and the pain more intense. No calculi had ever been voided. Blood had been seen at rare intervals. The pain always began in the right loin midway between the pelvis and the ribs. It then extended towards the middle line of the body, and down to the bladder and groin on the right side. Exertion was apt to induce it. Pressure on the right kidney caused acute pain, but no tumor could be made out. The urine was moderately acid, sp. gr. 1022, contained pus cells and a few red blood discs. There was no rise of temperature during the attacks.

The operation was performed January 12, 1889. The kidney, when exposed, moved freely during respiration. A deep stellate scar existed in the kidney, two inches from the lower end. No other abnormality was discovered. A sound was passed into the pelvis and a systematic exploration made, but no stone was detected. The capsule was then freely slit open for three inches. The edge of the cut gapped widely. The wound was then closed and an aseptic dressing applied. No urine passed by the lumbar wound. This soon healed, and since the operation, a period of four months, there have been no attacks of nephralgia.

DR. THEODORA A. MCGRAW, of Detroit: Three months ago I operated on a woman on the supposition that there was a renal calculus. None was found, but the capsule was freely slit and since the operation there has been no return of pain.

DR. LANGE, of New York: In one case of

severe pain recurring at irregular intervals, I operated with the expectation of finding a stone in the kidney, but none could be detected. I then proceeded in the manner described by the reader. The patient remained free from pain for three or four months. The attacks then reappeared.

DR. W. W. KEEN, of Philadelphia: I would like to refer to one source of error in the diagnosis of renal calculi, which has not been mentioned. I recently operated on a case of tumor of kidney in which, when the needle was passed into the substance of the organ, it gave a distinct impression of coming in contact with a stone. The tumor was malignant, and so adherent that it could not be removed. Subsequent examination showed that there was no calculus and that the needle must have come in contact with a calcareous vessel, of which there were several, or a mass of calcareous matter which was present.

DR. JOHN HOMANS, of Boston: I recently operated in a case in which there was a large swelling in the perineum, in a boy of 15 years. I removed, by perineal section, thirteen stones from the urethra. The urethra would admit my forefinger. There was also a swelling in the loin, which did not disappear after the operation. Three weeks later I opened the kidney through the right loin. I found a considerable quantity of pus, but could detect no stone, although I am not sure that a stone may not have been present.

DR. J. M. BARTON, of Philadelphia, read a paper on

DIGITAL DIVULSION OF THE PYLORUS FOR CICATRICIAL STENOSIS.

(See page 799.)

DR. R. A. KINLOCH, of Charleston, S. C.: I have no personal experience with this operation. We must accept the testimony of reliable men, but I cannot understand how an organic stenosis of the pylorus is cured by a single dilatation. This is not the case with organic stenosis in other parts, as the rectum and œsophagus. I am inclined to believe that where the benefit has continued for any length of time, the organic change has been slight. I can understand how benefit could be expected if the wound were kept open and the stricture systematically dilated.

DR. M. H. RICHARDSON, of Boston: The mortality of gastrotomy, as a primary operation, is extremely small. I have also found, from sixty dissections, that the longitudinal incision between the greater and lesser curvatures made the best incision for reaching either the pylorus or the cardiac extremity of the stomach. The shortest incision was one inch, but the incision usually required was two or three inches.

DR. J. EWING MEARS, of Philadelphia: While it may not be easy to explain the results obtained by digital divulsion of the pylorus, there can be no question as to the beneficial results. The evidence of reliable operators certainly indicates that it is a proper operation and attended with successful results. This operation should always be performed in preference to pylorectomy.

AFTERNOON SESSION.

DR. THEO. A. MCGRAW, of Detroit, read a paper entitled

A CONTRIBUTION TO THE HISTORY OF GUN-SHOT WOUNDS OF THE ABDOMEN.

Reference was first made to a case of gun-shot wound of the abdomen operated on by Dr. R. Abbe, of New York, July 8, 1886, in which, four hours after the accident, adhesions of the intestine to the abdominal wall were found, forming a cavity containing extravasated fæces. The adhesions were broken up, and four holes in the bowel and one in the bladder were closed. Suppression of urine and death followed. In August, 1887, the author was called to a case of gun-shot wound of the abdomen, fourteen hours after its occurrence. At the operation it was found that adhesions had formed, shutting off the peritoneal cavity. These were broken up and eight perforations of the bowel found. Five of these had become so occluded by lymph as to be detected with difficulty, and no discharge could be forced thro' them. Four feet of the ileum were excised. The patient died twenty-six hours after the operation. A study of these cases led the reader to suggest that under such circumstances the drainage of the cavity would be the best plan to adopt. The artificial anus or fæcal fistula could then be operated on at a later period. The question arises, whether or not these cases of early agglutination are sufficiently numerous to warrant our making them the point on which the treatment of all cases of penetrating wounds of the abdomen, over six hours old, must turn. This question can not be decided at present.

A review of the approved methods of treating gun-shot wounds of the abdomen was then taken up. The great danger has been shock. The shocks had depended, 1st, upon the time occupied in operating; 2d, upon the amount of evisceration; 3d, upon the number and the nature of the injuries to be repaired; 4th, upon the chilling of the intestines; and 5th, possibly upon the long-continued anæsthesia. In discussing the subject the following propositions were considered, many of them based upon experiments upon dogs and sheep:

1. The gravity of an injury of this kind depends partly upon the size of the missile.

2. Gun-shots which enter the abdominal cavity pass in a nearly absolutely straight line from the orifice of entrance, through the peritoneum to that of exit, or to their final stopping-place in the viscera. All apparent deviation of bullets fired

into the abdomen from a direct path are due to changes in position subsequent to the shooting.

3. An incision made directly in the course of the ball, will give the shortest route to the injured viscera.

4. The contents of the bowels may be made to discharge through an open gun-shot wound by manipulation and pressure.

5. An empty condition of the alimentary canal is most favorable to healing. To secure this it may be proper in some cases of injury of the bowel immediately after a hearty meal to evacuate the contents of the stomach by means of a syphon.

6. Agglutination and limitation of the morbid processes consequent upon gun-shot wounds may take place as early as the sixth day.

7. Senn's method of hydrogen-gas insufflation, however admirable in recent cases, should be used with great caution in cases four hours old, and especially in those made by small bullets.

8. The dangers of the operations for penetrating gun-shot wounds of the abdomen are directly in proportion to the length of the operation and to the amount of the evisceration. The duration of the operation may be lessened, 1st. Making the incision over the line taken by the ball, or if it has passed from before backward, over the point of entrance. 2d. By limiting the examination of the viscera strictly to such of them as may have been in the course of the ball. 3d. By suturing wounds of the intestine, wherever it is possible, instead of excising them. 4th. By omitting all operative procedures, even suture, in wounds which have become so thoroughly occluded by plastic material that the contents of the bowel cannot be pressed through them. 5th. By operating first on those wounds which imperatively demand it and leaving to the last those which may recover without operation. 6th. By never eviscerating a patient, except, first, when hæmorrhage is otherwise uncontrollable; and secondly, when there is a discharging wound which cannot otherwise be found. The evisceration of a patient is as dangerous as any gun-shot wound of the intestine which cannot be made to discharge its contents by manipulation or pressure can possibly be. There are cases where evisceration is necessary, but the author protested earnestly against the habit of eviscerating patients suffering from gun-shot wounds of the abdomen as a matter of routine. We are not warranted in turning a man inside out and subjecting him to frightful dangers in the mere fear that there may still be an undiscovered wound, when all the symptoms which ought to indicate such a wound are absent.

9. In cases of these wounds in which the patients may be too weak to undergo any radical operation for their repair, efforts for their relief may be made by incision and drainage, and in some cases by attaching the injured intestine to the abdominal wall, as in gangrenous hernia. This procedure, occupying but little time and making no draft upon the strength of the patient, may offer a hope of recovery which would not be possible under the expectant mode of treatment.

DR. D. W. YANDELL, of Louisville: The statement in regard to the course of balls is new to me. A number of cases which I have seen had led me to believe that balls entering the abdomen might deviate very greatly. I am not altogether prepared to accept the statement at present. In one case, in which the pistol was held near the individual and in a straight-line, the ball entered above the symphysis pubis, and was found below the spleen, having wounded intestines in its course. The recommendation that in the extreme cases, where the patient is greatly exhausted, the wounded intestine be secured at the abdominal incision, is certainly conservative, and it would seem to me to be wise.

DR. C. B. NANCREDE, of Philadelphia: There are such a number of cases on record in which it was supposed that the balls were deflected, that I think that there can be no doubt that this occurs occasionally. In regard to the incision, from my experience with both the median and lateral incision I am forced to the conclusion that unless we are certain that the ball has followed an antero-posterior course, the median incision is to be adopted in every case, with rare exceptions. I suppose that Dr. McGraw means by evisceration, removal of the intestines *en masse*. It makes a great difference, as far as shock is concerned, whether the intestines are removed all together or simply an inch brought out of the opening, immediately replaced and another portion examined, at no time exposing a large portion of the bowel. So many cases have been recorded in which death was the direct result of overlooking a single wound of the viscera or blood vessels, that the only safe rule is to make a thorough examination before closing the abdominal incision.

DR. J. EWING MEARS, of Philadelphia: The median incision is, I think, the one which should be adopted. It can be extended any desired distance, which cannot be done with the lateral incision. By the median incision the entire abdominal cavity can be inspected. In regard to what has been termed evisceration, I think that it is better to permit the patient to die without operation than that an incomplete or imperfect operation should be performed. I think that the surgeon would be almost criminally culpable if after subjecting the patient to the dangers of an abdominal section he closes the abdomen without satisfying himself by thorough examination that he has found every wound that could have been inflicted. It is not necessary to turn all the intestines out. It is sufficient to slip them through the hands, subjecting them to careful inspection.

DR. R. A. KINLOCH, of Charleston: After the

abdomen is opened in a search for wounds I think that every wound should be closed. We cannot say that one wound is of less importance than another.

DR. W. W. KEEN, of Philadelphia: As regards the line of incision, we should make a distinction between stab wounds and gun-shot wounds. In the former case I think the incision should be made at the point of wound, while in the latter the almost invariable rule should be the median incision. I can but agree with previous speakers that after we have opened the abdomen no case is properly treated if we leave by any possibility a single wound. Every wound should be sutured.

DR. C. H. MASTEN, of Mobile: In regard to the course of balls, I treated one case in which the ball entered one inch to the right of the umbilicus, made nine openings in the intestine, passed down through the bladder, out through the prostate, and lodged near the tuber ischii on the left side. The spinal column had not been injured.

DR. F. S. DENNIS, of New York: I believe that it is a rule, without exception, that the median incision should be made where we are going to sew perforations in the bowel, or stop hæmorrhage in the abdominal cavity. The point of first importance is the control of hæmorrhage. The median incision will permit the surgeon to enter the peritoneal cavity in half a minute.

DR. STEPHEN H. WEEKS, of Portland: I have not heard allusion in regard to the use of Dr. Senn's method. He laid stress upon two points, first, the use of the gas in determining whether perforation had occurred, and second, in locating the openings in the bowel. It seems to me that this latter is a valuable point.

DR. STEPHEN H. WEEKS, of Portland, Me., read a paper on

DRAINAGE AND DRAINAGE-TUBES IN THEIR APPLICATION TO THE TREATMENT OF WOUNDS.

He referred to the great importance of drainage, and after alluding to the various methods proposed for securing it, described a new form of absorbable drainage-tube prepared from the arteries of animals. The arteries used are those of the ox. They are separated from their sheaths, cut into tubes 4 or 5 inches long. They are then boiled in water for about five minutes. This sterilizes them and hardens their coats. Holes are next cut in their sides and they are passed over glass rods of different sizes, according to the size of tube desired. They are now placed in corrosive sublimate solution, 1:100, and allowed to remain ten minutes. Then they are placed in alcohol, 95 per cent., and at the end of twenty four or forty-eight hours the glass rods are removed, the tubes being kept in alcohol until needed. These tubes are unirritating to the tissues, they are absorbed in from five to seven days and drain the wound perfectly.

THURSDAY, THIRD DAY—MORNING SESSION.

DR. JOHN HOMANS, of Boston, reported

A SUCCESSFUL CASE OF NEPHRECTOMY FOR THE REMOVAL OF CANCER OF THE RIGHT KIDNEY.

The patient, a woman of 50, for a year had suffered with frequency of micturition. The urine had been dark and bloody at times. For three years she had suffered from indigestion. The tumor had been discovered in 1887 in the right iliac region, and since July, 1888, it had grown rapidly. It filled the right iliac region and more or less the umbilical and pubic regions. On palpation large irregular nodules were felt, and in some parts there was fluctuation. Laparotomy was performed January 21, 1889. The incision was made in the linea alba and was 4 inches in length. The tumor was exposed, and in the upper part was seen the remaining portion of the kidney and two large renal veins. These were tied with silk and the ureter was next tied and divided, and then the pedicle was readily ligated. The tumor was removed, a glass drainage tube introduced, and the wound closed and dressed with iodoform gauze and absorbent cotton. The tumor measured 6 by 9 inches and weighed 53 ozs. There was very little shock. The amount of urine since the operation has varied between 10 and 57 ozs. and has been gradually increasing. There was but little discharge from the drainage tube, which was removed on the fourth day. One month after the operation an abscess was opened in the right lumbar region. A slight swelling and some tenderness still remains in the right loin; whether these are wholly inflammatory or due to a recurrence of the growth cannot at present be determined. The patient is rapidly gaining strength.

The experience of the author led him to say that a large renal tumor which cannot be diminished in size by tapping (he would consider one weighing 1 lb. or more a large tumor), can most conveniently be removed by an incision through the linea semilunaris or in the linea alba. Small tumors and those that can be diminished may be removed by the lumbar incision. In cases of moderate-sized kidneys disorganized with pus, or tubercular or containing calculi, the lumbar incision is preferable.

DR. FREDERICK E. LANGE, of New York: In cases where a large tumor of the kidney is to be removed and where it is desirable not to open the peritoneal cavity, I have found a trap-door incision with resection of one or two ribs if necessary, give ample room for operation. I have operated nine times, but never for neoplasms. With free incision and open antiseptic after-treatment I re-

gard extirpation of the kidney, even in cases of large tumors, a comparatively safe operation.

DR. M. H. RICHARDSON, of Boston: There is a frequent anomaly of the vascular supply of the kidney which should be borne in mind in operations. Instead of one renal artery there may be three or even four arteries. If such a pedicle is ligated *en masse*, there is danger of slipping of the ligature and hæmorrhage. This is obviated by tying the pedicle in several sections.

DR. LEWIS S. PILCHER, of Brooklyn, read a paper on

THE QUESTION OF THE ANTI-TUBERCULAR POWER OF IODOFORM, WITH A SUGGESTION FOR A MORE EXACT CLINICAL TESTING OF THE SAME.

The paper first called attention to the different results obtained by the application of iodoform to tubercular tissues, according as the results were derived from clinical experience or from observation of tubercular affections artificially induced in animals. The following case was a contribution to the study of this question:

A girl æt. 13, with a family history of tuberculosis, came under observation with an infiltrated and ulcerated patch on each leg; there was also on each thigh an infiltrated patch without ulceration. The disease was of three months' standing. The diagnosis of tuberculosis of skin was made. The patch on the right leg was excised and microscopical examination confirmed the diagnosis; tuberculous nodules with bacilli were found. The patches on the thighs were also excised and healed without further treatment. Bismuth was applied to the patch on the right leg and healing progressed satisfactorily. It was then determined to apply skin grafts. The sore was curetted, the grafts applied and did well for a time. Later the epithelial elements broke down and a number of small ulcers formed. At the base of each ulcer was found a particle of bismuth. Portions of the tissue removed, however, showed no bacilli. No iodoform had been employed. Boracic acid ointment and the occasional application of nitrate of silver were now ordered. The ulcer on the left leg was curetted December 10, 1888, sprinkled with iodoform and covered with absorbent cotton. It rapidly healed, and on January 25 a wedge-shaped piece was removed and examined. It was entirely free from evidences of tuberculosis. A soft natural skin has since formed.

DR. W. H. PANCOAST, of Philadelphia, made some brief remarks on the following topics:

1. That the so-called metacarpal bone of the thumb did not belong to the metacarpal group; that its method of development clearly placed it in the class with the phalanges.

2. He next exhibited and described his urethrotome, which he had used with satisfaction for twenty years.

3. A delicate knife which he termed the therapeutic knife, employed for making numerous minute punctures in an inflamed part for securing an antiphlogistic effect.

4. A gun breech which had remained for some time unsuspected in the superior maxillary bone of a boy.

5. The use of black silk bandages and black adhesive plaster as adding greatly to the neatness of a dressing.

6. The use of iron dyed black silk ligatures.

7. His method of treating varicocele by passing a silk thread through the scrotum between the vas deferens and the veins, returning it through the same opening in the skin but in front of the veins, passing the ends of the ligature through holes in a metal plate and tying tightly. The cure is complete in three or four days.

The committee appointed to take action in regard to the death of Dr. S. W. Gross, presented the following:

WHEREAS, It has pleased the Almighty to remove from our midst Dr. Samuel W. Gross, who assisted in founding the American Surgical Association and contributed by his example and work largely to its success, who as a teacher was enlightened and impressive, as an author was accurate and original, as a surgeon was sound in judgment, rich in clinical experience, skilled in manipulation, and as a Fellow was genial and courteous; therefore, be it

Resolved, That the Association deplores his death as an irreparable loss, and directs that a copy of the foregoing be spread upon its minutes and forwarded to his bereaved family. Signed,

D. W. YANDELL,
P. S. CONNER,
J. EWING MEARS.

OFFICERS FOR ENSUING YEAR.

President—Dr. D. W. Yandell, Louisville, Ky.

Vice-Presidents—Dr. Claudius H. Masten, of Mobile; Dr. C. B. Nancrede, Philadelphia.

Secretary—Dr. J. R. Weist, Richmond, Ind.

Treasurer—Dr. P. S. Conner, Cincinnati.

Recorder—Dr. J. Ewing Mears, Philadelphia.

Council—Drs. John S. Billings, L. McLane Tiffany, W. F. Peck and F. S. Dennis.

Chairman of Committee of Arrangements—Dr. J. S. Billings, Washington.

The following were elected members: Dr. Stephen H. Weeks, Portland, Me.; Dr. Robert F. Weir, New York; Dr. John Homans, Boston; Dr. Lewis A. Stimson, New York; Dr. Frederick E. Lange, New York; Dr. Lewis S. Pilcher, Brooklyn; Dr. Levi Cooper Lane, San Francisco; and Dr. Arthur T. Cabot, Boston.

The Association then adjourned to meet in Washington the second Tuesday in May, 1890.

Philadelphia County Medical Society.

Stated Meeting, April 10, 1889.

THE PRESIDENT, W. W. KEEN, M.D., IN THE CHAIR.

DR. GEORGE ERETY SHOEMAKER read a paper on

EARLY RECOGNITION AND TREATMENT OF MALIGNANT DISEASE OF THE UTERUS.

In considering this subject two general standpoints present themselves; that of the pathologist and that of the clinician. While of course both are interdependent and of great importance, it is proposed in these remarks to give special attention to the recognition of cancer by the means available to the practical physician who is called upon to make up his mind during the life of the patient what the trouble is and what is to be done for the patient's good.

The importance of the subject, since every physician finds a large part of his practice to be among women, is shown by the mere statement that out of 4,600 cases of diseases of women reported by Emmett, 113 from all classes of society had malignant disease of the uterus, or 2.45 per cent.

As in the case of malignant tumors of other portions of the body, their existence in the uterus in advanced stages is easy to determine, though some obscurity as to the variety may remain. The peculiar sharp, inconstant, lancinating pain in abdomen, back and thighs; the discharge of watery fluid with a characteristic odor; the presence of hæmorrhage and cachexia; form a group of symptoms which are conclusive almost without an examination; while even the practitioner who almost never makes a vaginal exploration would not fail to recognize an advanced growth on touch and inspection.

Whatever be the nature of the growth, the immobile uterus, the cervix large, hard and patulous; the abundant nodules, hard, inelastic, immovable; the extensive ulceration, the probable presence of exuberant granulations if not cauliflower excrescences, with their friable, easily bleeding characters, will be at once recognized.

But it is in precisely these far advanced cases that diagnosis is least important, for the palliation from operative treatment is greatly less than in earlier stages. The time to diagnose cancer is in the very beginning, when thorough removal can be made, and it is just here that the average practitioner is at fault. Perhaps through lack of confidence in his own powers of diagnosis, perhaps from a general impression that no benefit would be derived from treatment, perhaps from a personal distaste for such examinations and long disuse of them except before and during labor (I say before and during labor, not after labor, for it would seem, as far as the writer's observation goes, not to be a habit among practitioners to satisfy themselves, by systematic examination at the end of every puerperal period, that no serious lacerations or displacements are left to produce future trouble), from whatever cause it may be, cases of malignant disease of the uterus are too often allowed to drift along through a most important period unrecognized. Even if not a specialist, if a practitioner will take the trouble to do his very best he can learn much in such cases. Let him take plenty of time, go to the trouble of securing a good light so that he can see clearly, let him see the case on his office chair if possible, at any rate not with the hips half buried in a bed, placed as far as possible from a heavily curtained window.

It is, however, true that in a few cases malignant disease will make considerable advance without giving rise to symptoms enough to bring about an investigation.

Early symptoms.—Bleeding in most cases first attracts attention. If menstruating the woman will lose more at her periods or may bleed between them, as she does from many other causes. If she has definitely ceased to menstruate, the occurrence of hæmorrhage, even though slight, should always lead to immediate examination; for while the cause is more likely to be fungous endometritis or a fibroid or polypoid tumor, evidence of cancer may be found. It is not a trifling matter to suggest that the results of this examination should be put upon record, with the date, even though apparently negative. The discharge is irregular, increased by exertion, and may consist either of bright blood which will clot, or of a bloody watery fluid, with or *without* odor. The patient may at the same time have a free leucorrhœa, of independent origin.

The nature of the disease may not be suspected by the woman, who may present every appearance of florid health, and whose previous life may have been more than usually free from disease. Usually, however, there will be some evidence of impaired vitality and loss of tone; though a true cachexia, with its dead-white, or sallow, or straw hue of the skin, its pinched and peculiar expression, belongs to a later period of the disease, when there is considerable constitutional change.

The very earliest symptom is in some cases *pain* while others will pass through all stages of the disease and remain remarkably free from it. The writer has in mind a case of his own, where the diagnosis of advanced epithelioma does not admit of question, and where pain has never occurred in any considerable degree.

In another case under his observation, but slight pain is present and that not characteristic.

It is said to be generally more severe in epithelioma than in the interstitial forms of disease,

and more apt to be severe when the infiltration passes beyond the cervix to the body of the organ. Infiltration of surrounding pelvic tissues involves pressure on sacral nerves, which occasions severe pain in one or both hips and down the backs of the thighs; but the pain may come from nipping of terminal fibres of the sympathetic system within the cervix or body of the organ. Persistent pelvic pain, especially if lancinating and extending to the loins and the back of the thighs, should excite suspicion of malignant growth, particularly in women near the menopause. The offensive watery discharge speaks of disorganization of tissue and is not often a very early symptom, though characteristic when found. Offensive leucorrhœa from other causes is not uncommon, but there is no smell like a cancer smell. The absence of odor is by no means indicative of the absence of disease, and this is true of *every other* single symptom.

Thus far there is nothing to suggest the variety of growth which may be present. Examination reveals more exactly the condition of affairs.

The malignant growths which may involve the uterus are quite variously classified, but may be given as follows in their order of frequency:

Epithelioma;

Encephaloid or "soft" cancer;

Sarcoma;

While scirrhus and colloid cancer (or as it is now classified by some writers, myxo-sarcoma) may be desribed as rare.

Signs.—In epithelioma, the finger in the vagina usually finds the cervix harder than normal even in early stages of the disease. The growth begins either in the mucous membrane lining the cervical canal, or on the vaginal portion of the cervix. If the former, the only fact discoverable by the finger will be an enlargement and hardening of the neck, while the os is enlarged and irregular. Ocular inspection may show nodules within the cervical canal, perhaps covered by an ashy deposit. Their color ranges from pale yellow to dark red, according to the amount of blood infiltration. Their hardness is quite characteristic. The mucous membrane is bound down and immovable. Goodell has suggested that in such a case the introduction of a sponge tent will materially aid the diagnosis. Says he:

"If the cervix soften down, the os dilate, and the mucous membrane become movable under the expansion of the tent, the disease is probably a benign one. If, on the other hand, the cervix remain hard, its mucous covering immovable, and the os unyielding, the suspicion of malignancy will be confirmed." (*Lessons in Gynecology*, p. 224.)

The uterus meanwhile may remain movable, and scarcely, if at all, enlarged, as the disease extends; while, as a rule, advancing no higher than the cervical canal, a rough friable mass occupies that passage, which breaking down in the centre, may leave the cervix excavated, so as to form a large cavity extending to the internal os. The edges of this cavity are often sharp, hard and irregular. Pain may still be almost entirely absent.

When beginning at the vaginal portion of the cervix, externally as it were, the epithelioma assumes one of two forms, either appearing as an ulcer with irregular edges and an excavated base covered with ashy-colored detritus, or else taking the form of a fungous mass. This mass of friable, rough granular feel may be spread out over the cervix, or spring from it as a pedunculated outgrowth, forming the so-called cauliflower excrescence. This form when present is sometimes very easily recognized by the fact that it feels as though portions could be broken off. A polypus is usually softer and smoother, and a papilloma is less fragile, less irregular, and may be enveloped by a continuous epithelial coating.

Two cases, seen for the first time within a few weeks of each other, may be cited in illustration, one of fungous-like epithelioma, and the other of fibrous polypus. Both women were beyond the menopause a few years. Both had some bladder irritation and pelvic uneasiness, but no pain. Both had borne children. Both had leucorrhœa. One of them had seen a little blood irregularly, and was pallid. In both, the only abnormal structure discoverable by the finger was a round pedunculated growth of about the size of a walnut, which grew from the cervix. The pedicle in each case was about half an inch through, was distinct, like the stem of a toadstool, but shorter; while the body of the growth in each case was roughened and firm.

Diagnosis of malignancy was made in one case at once, reliance being placed on the following points: The uterus was not normally movable, and was slightly enlarged, as made out bimanually; the pedicle grew directly out of the lower lip of the cervix, and above it could be felt the os distinctly. No other growth would have been situated here. A polypus or a papilloma of that shape would have come out of the os. The whole tumor except the pedicle was covered by nodules the size of those on a blackberry, and was not smooth to the touch. No impression of flexibility or elasticity was conveyed to the finger, the whole growth having that indescribable dense feeling which is easily recognized as belonging to this class of growths.

At the operation, as soon as the lower lip was cut away with the scissors, and the cavity of the cervix thereby opened up, it was found filled with very firm cancerous nodules of the size of a buckshot, or larger. This, of course, confirmed the diagnosis, but could not previously have been determined, for the os was not dilated at all.

In the other case, however, though the general resemblance was so great, the diagnosis of benign tumor rested on the fact that the pedicle, springing from somewhere within the uterus, came out of the os and expanded as a perfectly smooth stem, covered by smooth membrane, and giving the impression of a tough, homogeneous fibrous structure, which would bend and not break. The body of the growth was resilient, though firm, and indented on the lowest surface like a papiloma. The symptoms did not suggest malignancy, though they did not exclude it. They never do.

But it is in the very early diagnosis of epithelioma that we are most concerned. Though doubted by some writers, as Byford and others, there is very strong evidence to be brought forward in favor of the local and, as it were, traumatic origin of epithelioma. It seems in many instances to be a perverted effort of nature to repair an injury, as has been said by Emmet, and this gives a much greater significance to unhealed and irritated lacerations. Whether the theory of traumatic origin be accepted or not, it is not to be ignored that a man who has given as much attention to diseases of the cervix as has Emmet, should be able to say that he had never seen a case of epithelial cancer in a woman who had not at some time been impregnated.[1] Hofmeier, however, in his statistics of cancer of the uterus, speaks of 39 nulliparæ among a total of 812 cases.

The tendency of cicatrices to become the seat of morbid growths is well-known. The frequency of unrepaired lacerations, and the profound alterations of structure which often follow them, have led to careful microscopical study of the tissues which have been removed in the operations for repair, with the result of finding, as reported by Cushing, of Boston (*Annals of Gynecology*, April and June, 1888, etc.) to the Ninth International Medical Congress, several cases of undoubted cancer, which could not have been diagnosed from glandular hyperplasia and erosion by either sight or touch alone. This author has urged with great pertinency, that some cases of bleeding erosions in women of 50, or thereabouts, are undoubtedly beginning epitheliomata, and as the removal of such surfaces is a slight operation, it is worth doing and may be of the greatest importance. (*Annals of Gynecology*, June, 1888, preliminary article.) This he urges without admitting, as has been claimed by Ruge and Veit, that the transition stages of erosions into epitheliomas may be demonstrated, but the fact remains that some erosions are epitheliomas, and we cannot always tell which. It is unreasonable to say that every erosion should be removed by the knife or scissors, for we know most of them can be cured by proper treatment; but it seems justifiable, to say the least, to remove thoroughly all those which are stubborn in resisting well-directed treatment.

In doubtful cases, much light may be obtained by removing a wedge-shaped piece for microscopical examination; for while malignancy cannot be thus excluded, it may be found. It cannot thus be excluded, for it has been shown that cases showing clinically evident signs of malignancy, and so diagnosed by excellent authority, still have failed to show typical characters under the microscope. (*Cushing loc. cit.*)

No harm is done by this excision of a piece. The bleeding would be readily controlled by an alum tampon properly inserted at the time, and if the disease should prove to be malignant under the microscope, operation would immediately follow.

Encephaloid Cancer.—The early diagnosis of this disease is rarely, if ever, made. By the time obvious changes have occurred the disease has advanced so far as to have seriously infected neighboring glands and tissues, so that no thought of surgical removal is possible. This is particularly true when the body of the uterus is first involved. The usual point of origin is the lower end of the cervical canal in the submucous tissue. Ulceration destroys the mucous membrane, and vascular granulations appear. The whole cervix becomes hard, irregular and knotty, in a way that is simulated by no non-malignant disease. Irregular friable vegetations spring up and cover the whole lower end of the cervix. These bleed freely on being touched, and exude a watery offensive fluid, like the washings of raw beef. The further progress of the case, the infiltration of surrounding tissues and organs, the breaking down and sloughing, until all semblance of the normal configuration of the parts is lost, need not be here detailed.

Sarcoma of the uterus is not often met with. Its accurate diagnosis, either early or late, is usually impossible without the microscopic examination of a piece of sufficient size to show not only characteristic cells, but their relations to surrounding tissue. Scrapings may not be sufficient. It occurs in two forms: (a) *Circumscribed*, when it strongly resembles fibroid tumor, and constitutes the class formerly known as "recurrent fibroid." (b) *Diffuse*, when it involves the whole uterus, together with surrounding tissues and organs. The cardinal points in the diagnosis of sarcoma are, rapid growth, a few months only at times; cachexia, especially significant where there has been comparatively little loss of blood; extreme pain; the presence of serum in the freely flowing blood (which is not found in non-disintegrating fibroids, but is found in carcinoma); the soft, brittle, brain-like character of proliferating portions, if any can be felt. This separates it from carcinoma. Carcinoma is not so apt to form a circumscribed tumor. But, after all, the

[1] Principles and Practice of Gynæcology. Page 509.
[2] Zeitschr. f. Gebürtsk. und Gynäk., vol. x.

practical point is the diagnosis of malignancy, for early removal is the rule in any form of growth.

Scirrhus and myxo-sarcoma present no early signs of individuality which need be considered here.

After all, there remain certain cases in which the early diagnosis of malignancy is practically impossible, and the decision for or against a radical operation becomes a matter of great anxiety to the physician. When the disease is not accessible at the cervix, but begins within the body of the uterus, or even at the internal os, the excision of a piece for examination is not practicable in ordinary cases. One is then obliged to wait, perhaps too long, for some definite guide. Such a case has just been troubling the writer. The uterus is small and soft. Pain is slight and recent. A most intractable pruritus, of two years' standing, is due to the cervical discharge. Except for a lining membrane too dark in color, the lower part of the cervix is about normal in structure; it is excavated, and admits the whole of the first phalanx of the finger, but a peculiar laceration partly, if not wholly, accounts for its patulous condition. The lining of the uterus is smooth, but just at the internal os, beyond the point where the finger-tip stops, the curette finds little elevations, entirely too tough and gritty to make the mind easy. This patient has been closely watched and carefully studied. I shall proceed at once to remove the suspicious tissues, but the decision has not been an easy one to make.

Even later on, diagnosis may not be easy.

In another case at present under the writer's care, the portion of the uterus accessible from the vagina is soft and not nodular. There is no bleeding, and no discharge, pain, or other symptom which cannot be partially accounted for by a well-defined stricture of the rectum and its consequences. Bimanual examination is practically negative, since the true pelvis is choked by a smooth mass cementing in the uterus. The vaginal roof is hard, smooth, unyielding, suggesting the results of a late confinement which had inflammatory sequelæ, but the stricture helps to throw light on the case. Even this is smooth, and not typically cancerous, so that the aggravating word "probable" must go down with the diagnosis of malignancy. Long since did observation show the writer that the brilliant and dogmatic diagnosis of tumors flourishes chiefly in the clinical lecture-room and in the journal reports of just completed operations.

Treatment.—This is, of course, eminently surgical. As in cancer of the breast, not every case of malignant tumor of the uterus is to be operated upon by any means. There is room for the exercise of much judgment. One fact, however, is established beyond all question; it is that years of life and great suffering may be saved by early and radical removal, especially of epitheliomas. If the operation is not thorough, life is shortened by it, except in the later stages.

If the disease is still confined to the cervix and lower uterine segment, several operations may be made. One of the best is the amputation of the vaginal portion of the cervix (Schroeder so far), and then with a knife cutting out a cone-shaped piece from the body of the uterus, including the canal, following with the Paquelin cautery. This is the operation of Baker, of Boston. Emmet uses scissors, knife, and curette with Simon's spoon, to shell out the diseased tissue, and then, as far as possible, draws mucous membrane over the raw surfaces by stitches. Most operators apply either the Paquelin cautery or, as recommended by Marion Sims, chloride of zinc as a caustic, after as much tissue as possible has been cut away. The dangers after such operations are from hæmorrhage and septicæmia, but the mortality is small. There is a very strong ground for belief that the actual cautery lessens the risk of subsequent development of disease. It certainly retards it more than the knife if all is not removed. Total extirpation of the uterus is coming into prominence in this connection, and statistics are rapidly accumulating. By the use of compression forceps for the lateral vessels, instead of ligatures, the mortality of the operation has been enormously diminished in good hands, but the place of the operation in surgery of the uterus has not yet been definitely settled. There is very little to show its advantage in ultimate results over Schroeder's method of high amputation of the cervix, where the disease usually lies, especially if followed by clearing out the interior of the uterus, as advocated by Baker, of Boston. If the disease is just beginning, the safer operation is just as thorough. If the disease is further advanced, to remove the entire uterus is not to remove surrounding infected glands and tissues, and there are no statistics which show conclusively that the liability to return is less than in the other operation. On the contrary, while recent methods of total extirpation have undoubtedly greatly reduced the risk of death from the operation itself, and while as long a series as thirty without a death has been reported in one institution, the University Frauenklinik, at Berlin, yet a consideration of the after-history of these patients is strongly in favor of a partial operation.

Taking from Hofmeier's reports, 129 operations of both varieties at this hospital as available for study, because their after-history could be traced, it is found, as stated by Lusk,[1] that at the

end of the first	year,	51	per ct.	of the	partial	cases	remained	well.
" second	"	46	"	"	"	"	"	"
" third	"	42	"	"	"	"	"	"
" fourth	"	41.3	"	"	"	"	"	"

[1] American System of Gynecology, ii, p. 630.

Again, at the

end of first year 63.6 per ct. of the complete cases remained well.
" second " 24.1 " " " " " "
" third " 26 " " " " " "
" fourth " *not one living* complete case remained.

So, while brilliant operators, whose death-rate from the operation remains low, may be expected to advocate total extirpation of the uterus, it is likely that the majority of gynæcologists who are more interested in the freedom from recurrence than in the operation mortality, will await the evidence of further experience, now rapidly accumulating, before giving preference to this operation.

When, at the time of discovery, the uterus is found fixed, the vaginal vault infiltrated, and evident involvement of parts which cannot be removed; it is not wise to interfere, unless there be extensive hæmorrhage, extreme pain, or septicæmia from absorption of necrotic material. The same rule holds here as in cancer of the breast; there is an intermediate period, between an early and a late stage, when the highest good of the patient is to be secured by letting well enough alone; correcting fetor by injections of potass. permang., creolin, or hydronaphthol, lessening hæmorrhage by alum or dilute subsulphate of iron injections, maintaining the general strength as far as possible by strict attention to the problems of nourishment and good hygiene; securing sleep and comfort by chloral locally or opium by suppository, and waiting. There comes, however, a third stage, when surgical interference may be of great service. When the strength is being rapidly reduced by discharge, by severe hæmorrhage, or by septicæmic fever, the patient should be etherized, and the vegetations rapidly removed by curette or spoon, down to firm, if not sound tissue. A thorough application of the thermo-cautery will then not only arrest hæmorrhage, and lessen the subsequent danger from it, but will check further growth for a considerable time. During the curetting bleeding will be free, but this should be carried on boldly and rapidly until the vegetations have been removed, when it will either cease or be checked by the thermo-cautery. A tampon saturated with some styptic, such as alum, should, however, always be inserted after the operation, and the vagina filled with antiseptic non-absorbent cotton or strips of gauze. This will lessen the risk from sudden hæmorrhage, in the absence of the physician, and should be removed and replaced at proper intervals for several days. It is surprising how much temporary relief will follow for awhile, and existence is often made comfortable for a month or more, while the risk is very small.

For *cleansing purposes* in the general conduct of a case, an experience of a considerable number of cases in the cancer annex of the Home for Incurables, among the out-patients of the University Hospital, and the St. Clement's Dispensary, as well as in private practice, leads to the preference of permanganate of potash solution. It is cheap, non-poisonous, unirritating, and effective. Creolin is now on trial, so far with very satisfactory results.

Hæmorrhage, if not controlled by alum, or other astringent, may often be arrested by pressure so applied by tampon as to bear directly upon surfaces, and not slide over them. If very considerable, it will call for the use of the curette and the hot iron.

For *pain* antipyrin has not proved very satisfactory, though not extensively tried. In one case it gave great relief to general nerve pains, but did not greatly affect the cancer pain. Cocaine is, of course, too transitory and too superficial in action.

Nothing will take the place of opium, guarded by atropia, in the relief of decided pain. Other drugs give much help in insomnia and restlessness when not caused by definite pain from nerve involvement. The opium habit when at length formed, and it may by care be long deferred, is by far the less among evils. No definite improvement in the case, as a whole, has ever seemed to follow the use of drugs given for the disease itself.

A *summary* may be made as follows:

a. Early diagnosis is all-important, and should not be deferred until gross changes have occurred.

b. Examination should follow slight suspicions from the treacherous character of the symptoms. If not conclusive, it should be made by a trained hand.

c. The microscope will sometimes detect before other means will.

d. Heredity is a doubtful cause, traumatic origin very probable.

e. Lacerations of the cervix, where the growths usually begin, should be repaired if causing irritation, and erosions should be cured. If erosions are stubborn, or otherwise suspicious, they should be pared off.

f. In epithelioma especially, the disease is at first local, and if taken early complete immunity is secured sometimes, and always great saving of time and suffering.

g. From an operative point of view, there are three periods in any form of malignant disease.

1. Early, when operation should be immediate and as radical as possible, without extirpation of the uterus.

2. Intermediate when, eradication being impossible, nothing should be done unless demanded by severe hæmorrhage or extreme pain. The length of this period is indefinite, and depends on the rapidity of growth.

3. Late, when scraping and burning may be done repeatedly, to palliate symptoms and retard growth.

DR. W. W. KEEN reported a case of

SIMULTANEOUS AMPUTATION OF BOTH ARMS; RECOVERY.

For the notes of this case I am indebted to Dr. J. C. Heisler, then surgical interne at St. Mary Hospital, and is put upon record as a contribution, at least, to the statistics of multiple amputations.

Paul K., æt. 15 years, was run over by a street car, at 5 o'clock, P.M., on November 13, 1887. He was admitted to St. Mary's Hospital two hours later. The right hand, forearm and elbow, as well as the left hand and lower part of the forearm, were crushed; both clavicles, also, were fractured.

The boy had lost a great deal of blood before his admission, and was in profound shock when admitted; so grave was his condition that it was doubtful whether he would live through the night.

My colleague, Dr. J. B. Roberts, saw him late in the evening, and ordered whisky and digitalis.

At 10.45 P.M. his temperature was 97°; his pulse 120.

The next morning the temperature was 102.5°; pulse 142. At 1 o'clock P.M. his condition was very grave, but, as he had rallied from the shock, I decided to give him the only chance of his life by amputating both arms. The right arm was amputated below the insertion of the deltoid; the left forearm at its middle. The moment that the first amputation was done, during the dressing of that arm by my assistants the second was proceeded with, so as to lose as little time as possible. He bore the ether badly, and his pulse at times was almost imperceptible. Almost no blood was lost during the operations, the arm being Esmarched above, but not including, the crushed parts. Of course, the most careful antisepsis was carried out. There was no need for hot bottles, etc., as his temperature was well maintained. From the time of the operations his recovery was a perfectly steady one. For the first three days the morning and evening temperatures were about 100° and 102° respectively. From that time on it fluctuated between 99° and 100°, reaching the normal by the tenth day.

On the third day after the operation the anterior flap on the left forearm began to slough; by the end of a week a piece 2 inches transversely by ½ an inch in the axis of the limb was completely separated. The gaping wound now exposed the end of the radius covered with granulations springing from both the periosteum and the medulla. In order to promote adhesion of the flaps extension was applied to them by means of adhesive strips, on which traction was made by a rubber band. This band extended to the end of a straight splint applied to the forearm, counter-extension being maintained also by adhesive plaster which was tacked to the upper end of the splint. At the end of two weeks the lips of the wound were united, and the splint was taken off. The right stump healed kindly, all the sutures being removed by the twelfth day. The boy was up ten days after the operations, and was sent home six days later to come to the hospital as an out-patient until he was entirely well. He was finally discharged at the end of January. Two small circular sequestra separated from the ulna and the radius of the left stump, and were removed January 9th and 24th. The recumbent posture was the only treatment used for the fractured clavicles. They united very well, and with but little deformity.

DR. E. P. BERNARDY reported a case of

UNIQUE PRESENTATION OF A FŒTUS.

The patient who gave birth to this child was a primipara, æt. 18 years. I saw the case for the first time at 8 o'clock, April 8, 1889; the membranes had been ruptured four hours, the fœtus was presenting in the right oblique diameter; the presenting part seemed to be the breech, the right side deeper in the pelvic cavity than the left; the fingers could be hooked in what appeared the groin, but did not have the full feeling one would expect in breech. A sort of sulcus or fissure was in the centre of the presenting part. Passing the fingers further upward, the bone of the skull was detected. I thought that I had a double pregnancy, the breech of one presenting, and the head of the other imbedded in the chest of the first. External palpation showed the uterus divided in two by a deep dent in its fundus, a large body occupying the upper left portion, and a body occupying the lower portion of the right side.

I did not introduce my hand into the vagina, for the maternal parts (vulva) were rigid, and had not undergone any softening, and such examination would have undoubtedly caused a rupture of the perineum; the os was spasmodically contracted around the presenting part. The patient not having much pain, and having to deliver a hydrocephalic case, I left her for about two hours. On my return, the entire portion which you here see, was grasped by the vulva, and the child was delivered in this position. It will be seen that both shoulders presented fair and square, the neck, somewhat stretched, thrown forward on the chest, and the head, slightly twisted sideways, laying in a cavity in the chest; the arms laid on the top of the chest, right and left side, the head between. There was hardly any pain connected with the confinement.

This is a rare case; I cannot recall an instance of a similar presentation.

(To be concluded.)

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR REGULAR CORRESPONDENT.)

Proposed Hospital for the Study and Curative Treatment of Insanity—Compressed Gas for the Removal of Warts—Experiments with Massage—The Medical Aspects of Life Insurance—Hysteria in the Male Identical with the Disease as seen in Women.

On the motion of Mr. Brudenell Carter the London County Council has appointed a committee "to inquire into and report to the Council upon the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital, with a visiting medical staff, for the study and curative treatment of insanity." The report of the committee will be awaited with much interest by all who devote attention to this most painful subject. It is thought that the authorities of the existing asylums are so much engaged in administrative work that they have little time for scientific study. In the proposed hospital, the primary duty of the visiting medical staff will be to investigate the conditions of insanity and to discover, if possible, more effectual remedies than any that have yet been found for one of the most grievous of human maladies. It is to be hoped that the suggestion as to a hospital will receive most thorough consideration, and that the committee will take care to obtain the very best advice that can be offered by the medical profession.

Dr. Benjamin W. Richardson, ever foremost in practical scientific medicine, has made a suggestion which is as interesting as it is novel. It is to use a jet of highly compressed gas as a cautery. It is known that accidents occur to workmen sometimes in factories where compressed gases are prepared or employed by such a jet impinging on any part of the body, and causing an injury of the same nature as a burn. Dr. Richardson turns this property to account, and suggests its employment for the removal of warts and small pendulous growths. It does not appear that he has carried out the idea in practice, but he intends shortly to do so. He points out its advantages over the cautery, heated wire or knife, in that it is less alarming and for the moment painless, as cold is an anæsthetic. He enumerates the gases which might be used and specifies chlorine as no doubt most effective. He, however, gives the palm to carbonic anhydride (CO_2) as most manageable, cheap, almost inodorous, not unwholesome and not inflammable, so that it can be used with artificial light. It is now a little over twenty years since Dr. Richardson introduced ether spray as a means of producing local anæsthesia. It remains to be seen whether the present suggestion may not lead to an equally important weapon in the armory of the surgeon.

A medical man has kept four students under observation while they underwent a daily course of massage for twenty minutes. All four methods, viz.: effleurage, pétrissage, friction and tapotement, were brought into play at each operation. The general result was that in every case the appetite showed considerable improvement, not merely during the week in which massage was performed, but during the week following as well. Two of the patients increased in weight in the course of the week's massage, while two decreased; but, curiously enough, all showed a marked increase during the subsequent week. In every instance it was observed that the respiration became fuller and more frequent, while the beating of the pulse increased in rapidity when effleurage was in progress, decreasing when pétrissage was substituted.

For four nights Dr. E. Symes Thompson, the Gresham Professor of Medicine, interested as many people as the theatre of Gresham College would hold while he lectured to them on "The Medical Aspects of Life Assurance." Speaking on the insurance of young infants, the doctor said that certain offices existed which insured very small babies in such a manner that a very great temptation was put upon the guardians or parents of the children to hasten them out of the world. It was curious to note that in the places where mortality among infants was exceptionally high, the desire of parents to insure their children was very pronounced. As showing the enormous advantage that the teetotaller has of living long as compared with the general body of mankind, the doctor exhibited two statistical tables—one of the Rechabites and the other of the Oddfellows, from which it appeared that among the Rechabites the average sickness per annum was four days, the death-rate was one in 141, and the weekly payments were 5s. 9½d., while among the Oddfellows the average sickness was thirteen days, the deaths averaged one in 44, and the weekly payments amounted to 13s. 1d. What made the contrast more remarkable was the fact that the Rechabites admitted females as members, while the Oddfellows would have nothing to do with the ladies.

Dr. Adami considers that, for all practical purposes, hysteria in the male is identical in its manifestations with the disease as seen in women. He divides the cases into two classes, the first including those cases which were complicated by the occurrence of the so-called hystero-epileptic attacks, though, as suggested by Sir William Roberts, hysteroid attacks would be a better term. The second group consists of those attacked by hysterical hemiplegia or paraplegia. The male hysteric was rarely so emotional as the female; most often he is rather phlegmatic than emotional, and in him the attack of "grand hys-

teria" rarely or almost never, even in France, passed on to that series of exaggerated portrayals of emotions which Charcot had described as occurring in the most advanced female hystero-epileptics. The most usual period for hysteroid fits in the male is from 18 to 22. In the second class of male hysterics there might occur almost every variety of mono- or hemi-paraplegia, aphonia was frequent, though the face was not affected. There might be contractures, with diminished or increased tendon reflexes, various forms of anæsthesia and hyperæsthesia, and vaso-motor disturbances with affection of the muscular sense and the special senses, notably retraction of the field of vision. Such cases most frequently resulted from injury, notably railway accidents, though not a few, as in women, were apparently related to disturbances of the generative function.

Dr. Horatio Donkin has married the widow of Professor E. H. Palmer, the distinguished Orientalist and traveler. Dr. Donkin, it may be remembered, was Professor Ray Lankester's principal assistant in the exposure in 1876 of Dr. Slade, the Spiritualist.

Medical men in general are probably not aware that in France, at least, the doctor's claim on the estate of a deceased patient has precedence of all others. Even the landlord's claim for arrears of rent must yield to the doctor's fee. The courts have recently decided that, as it is an imperative right of humanity that the dying should have the necessary care and treatment, such attendance should be paid for before all the other debts.

A £10,000 fee has, it is stated, been given to Dr. Freyer, a surgeon in India, for his successful treatment of the Nawab of Rampur.

Trichina in muscle can be detected, it is stated, by placing thin slices of the suspected meat in a test tube with pepsin, water, and a little hydrochloric acid. After a few hours' digestion in a warm place, the parasite will become so loose and prominent that it can be easily picked out with a needle and identified under the microscope.

An obituary announcement in a daily paper recently included the remark that E. P. wishes to express his thanks to the Superintendent of the hospital and the many doctors who attended him during his last illness. G. O. M.

DOMESTIC CORRESPONDENCE.

Shall the Section of Obstetrics and Diseases of Women be Abolished?

Dear Sir:—At the last meeting of the Association a member introduced an amendment to the By-Laws looking to the abolition of the Section of Obstetrics and Diseases of Women; relegating the former branch to the Section of Pediatrics, and the latter to the Section of Surgery. Inasmuch as the proposed amendment will be acted upon at the approaching meeting at Newport it should receive very careful consideration, and particularly since it involves a radical change in the working organization of the Association. That such consideration may be had I beg to direct attention to a few facts bearing upon the action contemplated by the amendment indicated.

The Section of Obstetrics and Diseases of Women has for a number of years been one of the most largely attended and most active of the various Sections of the Association. The papers annually presented there come from all parts of the Union, by men eminent in these departments of medical science, and a large number of practitioners annually attend and participate in the discussions. The programme of this Section, as published for the approaching meeting, is the largest in number of papers and most comprehensive in the range of subjects of any of the Sections, embracing forty-eight (48) papers, many of the authors being of National, and some of world-wide reputation. Hence it cannot be justly claimed that the Section as now organized is wanting in efficiency. Let us then consider some facts bearing upon the relation of obstetrics and gynecology, which naturally associate these two departments scientifically and practically, and which, at the same time, show that the separation would necessarily impair the cultivation of both by the members of the American Medical Association.

The intimate relation and connection of these two branches has long been recognized in our system of teaching, both in this country and in Europe; in practice, in medical literature, and in the organization of societies, local and national. In most medical schools in America and Europe the two branches are taught jointly. *The American Journal of Obstetrics* and *The Annals of Gynecology* are devoted to the joint cultivation of these associated departments of medical science and practice. The American Gynecological Society, and that energetic organization recently instituted, the American Association of Obstetricians and Gynecologists, not to mention the Obstetrical Societies of Philadelphia, of New York, of London, and other cities attest the same fact.

Not only are these branches united in our system of education, in our literature, and in our society organizations, but in practice. One of the most distinguished of American laparotomists is the Physician-in-Charge of a model maternity hospital, and almost all American gynecologists are connected with public obstetrical services. In many of the most admirable European institutions the obstetrical and gynecological departments are under the same roof and conducted by the same

head.[1] In private practice most of the leading gynecologists are habitually engaged in obstetric practice as attendants and consultants.

But there are weightier reasons still why this important Section of the Association should not be divided. The greatest triumphs of modern obstetric science and the most important improvements in obstetric practice consist in the application of the principles of abdominal surgery to the lying-in woman. The technique of modern obstetric practice and that of pelvic surgery are formulated upon the same principles and require the same line of study and training for their mastery. The woman after labor is exposed to the same great danger of sepsis as the woman after ovariotomy. To execute the improved Cæsarean section requires all the skill and knowledge essential for the most difficult intra-abdominal operation and a thorough familiarity with pregnancy and the puerperal state.

Most of the operations in gynecology are for conditions the result of, and directly connected with, pregnancy and parturition, and of necessity involve thorough knowledge of those conditions.

For these reasons both the study and practice of obstetrics and gynecology must remain so correlated that they can only be successfully cultivated conjointly. To abolish this Section of the Association, now so successfully conducted, would scatter the members into other crowded Sections, and do the cause of science and the Association serious injury.

* * *

[1] For example, the admirable Frauenklinik conducted by Professor Freund, in Strassburg, and that by Professor Winckel, in Munich.

MISCELLANY.

THE CRONIN ASSASSINATION.—The Chicago Medical Society adopted the following resolution at a meeting at the Grand Pacific Hotel June 3d :

WHEREAS, Dr. P. H. Cronin was recently decoyed from his office and assassinated ; and

WHEREAS, Dr. Cronin, although not a member of the Society, was a regular member of the profession, of recognized ability ;

Resolved, That the death of Dr. Cronin, occurring as it did, while the Doctor was in the intent of extending to a sufferer the benefices of our art, is a matter of deep regret to the members of the Society ; and

Resolved, That the Secretary be instructed to extend to the relatives and immediate friends of the deceased the sympathy of the fellows of this body.

THE 75,000 EXTRA EDITION.—The "Extra Edition" of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has come to us full of interest and information. In a special article by Dr. Wm. G. Eggleston, of Chicago, it gives a tabulated list of the various medical colleges in the United States, their date of organization, matriculation and graduation requirements, etc., and adds facts which deserve the notice and careful consideration not only of practitioners, but students of medicine, and those contemplating entering this field of professional life. Much is being said upon the subject herein treated, the laudable intent of which is to elevate the standard of medical education throughout our country, and we add our voice to the movement, hoping that some steps may be adopted which may at once check the increasing tendency of many little competent and poorly prepared to undertake a work of so great importance and responsibility as the practice of medicine, and aid our colleges, while denying none worthy, in sending out only graduates well equipped for the sacred duties of physicians.

THE JOURNAL announces the annual meeting of the American Medical Association to be held at Newport, R. I., June 25, 26, 27 and 28, giving a programme of the same, and adds attractive views illustrating this beautiful city by the sea. We join in wishing that the convention may be as pleasant and profitable as those of the past.—*The Atlanta Medical and Surgical Journal.*

POSTPONEMENT.—The Annual Meeting of the Pennsylvania State Medical Society has been postponed until the first Tuesday in September in consequence of the recent disastrous flood in the Conemaugh Valley.

THE MCLEAN COUNTY (ILL.) MEDICAL SOCIETY.—This Society met in regular session at the office of Drs. Darrah & Corley June 3d. There were present, Drs. H. Parkhurst, T. W. Keys, G. R. Smith, H. A. Winter, F. J. Parkhurst, N. F. Jordan, J. B. Taylor, A. T. Darrah, W. A. Elder, L. E. Spear, C. J. Corley, F. J. Welch, W. H. Reedy, W. L. Pollock, C. C. Sater, H. F. Ballard. The session was devoted to a discussion of the physiological action of antifebrin and antipyrin. The discussion was general and very interesting. It was conceded by all that these new remedies were not only useful as antipyretics, but were of much value in a variety of diseases, especially those of a rheumatic and neuralgic character. The fact was developed that the remedies under consideration were powerful sedatives and required great caution in their use. Dr. Rhoda Galloway, a graduate of the Woman's Medical College, Chicago, was elected to membership. Dr. J. B. Taylor extended an invitation to the Society to attend the commencement exercises of the Wesleyan University, June 13, to hear the address of Dr. M. L. Fullinwider, of Eldorado, Kan. The invitation was accepted, and the Society voted to attend as a body. The application of Dr. H. F. Ballard, of Chenoa, for membership, was received and referred to the Board of Censors. The President appointed Drs. J. B. Taylor and C. J. Corley as essayists for the September meeting, and the Society adjourned to meet the first Monday in September.

THE meeting of the Mitchell (Ind.) District Medical Society will be postponed till July 18, 19 and 20th, at West Baden, Ind., on account of the meeting of the American Medical Association.

IN the Bombay Presidency no fewer than 1,168 human beings were destroyed by snakes during 1887, and over 300,000 venomous snakes were destroyed.

THE ODOR OF SOUND MEAT.—In the normal state the flesh of every animal has its own characteristic odor. Beef has a special insipid kind of smell, modified by the different modes in which the animals have been fed. Thus it is stated that the flesh and milk of cattle in the polar regions has a fishy odor, because the absence of pasturage obliges the inhabitants to feed their oxen and cows on fish. Veal smells of milk, mutton of wool and sometimes grease. The normal odor of pork is insipid and inoffensive, but when the pigs are fed on offal the flesh has a pale cachectic hue, and an offensive smell and taste. The odor of poultry fed on corn differs from that of poultry artificially fattened. In a diseased state, meat emits a typical odor resembling the breath of feverish patients. This odor is particularly noticeable beneath the shoulder, and in the muscles of the inner side of the leg. The odor should be carefully noted immediately

after the incision is made. This should be done by the inspector himself. When diseased meat is roasted it emits a strong and offensive smell. The fever odor is particularly marked in the case of animals which have suffered from peritonitis, charbon, morbid symptoms following parturition, or with ordinary acute disease. In such cases the smell is recognizable at once, and it is unnecessary to make any incision. "Feverish" meat is always unfit for consumption.—*The Annals of Hygiene.*

THE MERCURY SALTS are among the most important of the substances affected by actinic light. The conversion of the *mercurous*, or non-poisonous, to the *mercuric*, or poisonous salts, is likely to be attended with fatal results, when the change has been sufficiently great. Calomel, therefore, should be kept in amber bottles away from light to prevent its being converted into the poisonous corrosive chloride.

DEATH OF WARREN DE LA RUE.—The *National Druggist* says: This man, noted alike as an astronomer, chemist, electrician, physicist, photographer, and pharmacist, and as an investigator and writer in almost all domains of scientific research, died at his home in Guernsey, April 19, aged 74 years. In his early years he succeeded his father as the head of the Paris manufacturing house of Thos. de la Rue & Cie., and continued in this position until 1880, when he retired. His published works embrace almost the entire domain of science. In pharmacy his greatest, or at least best known, were his investigations of cochineal and (in conjunction with Müller) of rhubarb and its constituents, and to him, with Müller, belongs the discovery and isolation of chrysophanic acid. The notice of his death in the *Pharmaceutical Journal and Transactions* says: "But his name is most associated with the application of photography to the recording of celestial phenomena, on which subject he produced a large number of papers. In connection with Dr. Müller, also, he carried on a series of investigations upon the electrical discharge, using a battery of 15,000 chloride of silver cells, the results of which were given in a collected form in a lecture at the Royal Institution in 1881. Amongst the many honorary posts filled by Mr. de la Rue may be mentioned those as honorary Secretary, and afterwards President of the Astronomical Society, President of the Chemical Society for two separate periods, President of the London Institution, and Secretary of the Royal Institution. In addition he was a member of numerous foreign learned societies.

LETTERS RECEIVED.

Dr. R. J. Dunglison, Philadelphia; Dr. S. T. Armstrong, U. S. M. H., Stapleton, N. Y.; Dr. E. S. McKee, Cincinnati; Dr. Herbert B. Alleyn, Philadelphia; Drs. Lewis & Thompson, St. Louis; Dr. A. W. Mann, Oak Grove, Mo.; Dr. J. O. Dawson, Lincoln, Neb.; Dr. W. D. McGowan, Ligonia, Pa.; Dr. B. Weltner, New York; Dr. G. H. Gibson, Breckenridge, Col.; Dr. Hugh Hanna, Prosperity, Pa.; Frank, Kiernan & Co., New York; Trommer Extract of Malt Co., Fremont, O.; Dr. L. S. McMurtry, Danville, Ky.; Lambert Pharmacal Co., St. Louis; Sanitarium, Battle Creek, Mich.; Dr. Chas. F. Disen, Minneapolis; Johnson Eliot, Washington; F. A. Davis, Philadelphia; Dr. Sauerhering, Wausau, Wis.; Dr. J. W. Smith, Pilot Point, Tex.; H. N. Jarchow, New York; Dr. W. J. Asdale, Pittsburgh; Dr. J. M. Dunham, Columbus, Ohio; Dr. C. P. Frost, Hanover, N. H.; Dr. Karl von Ruck, Asheville, N.C.; E. Bair, Louisville, Ky.; J. L. VanSchoick, Perrineville, N. J.; Dr. G.W. Burton, Mitchell, Ind.; Upjohn Pill and Granule Co., Kalamazoo, Mich.; Dr. O. Eastland, Wichita Falls, Tex.; Dr. J. M. Farrington, Binghampton, N. Y.; Dr. H. Longstreet Taylor, Cincinnati, O; Dr. John B. Meazie, Claypool, Ind.; Joseph Swindell, Washington.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from May 25, 1889, to May 31, 1889.

By direction of the Secretary of War, Major John S. Billings, Surgeon, is authorized to make, in connection with his duties as supervisor of mortality and vital statistics of the eleventh census, such journeys as may be ordered by the superintendent of the census, provided that, in each case, the approval of the Surgeon-General shall be obtained; and provided further, that the journeys shall involve no charge against the fund for transportation of the Army. Par. 12, S. O. 122, A. G. O., May 27, 1889.

Major Henry McElderry, Surgeon U. S. A., is granted leave of absence for one month, to take effect upon completion of his duties as a member of the Army Medical Examining Board in New York City. Par. 4, S. O. 117, Hdqrs. Div. of the Atlantic, Governor's Island, New York City, May 23, 1889.

Major J. H. Patzki, Surgeon, is granted leave of absence for twenty-one days. Par. 1, S. O. 44, Hdqrs. Dept. of Ariz., Los Angeles, Cal., May 18, 1889.

Capt. Paul R. Brown, Asst. Surgeon, is granted leave of absence for six months on account of sickness, by direction of the Secretary of War. Par. 13, S. O. 122, A. G. O., May 27, 1889.

Capt. Walter W. R. Fisher, Asst. Surgeon, leave of absence for one month granted by S. O. 30, c. s., Dept. of California, is extended fifteen days. Par. 3, S. O. 37, Hdqrs. Div. of the Pacific, San Francisco, Cal., May 22, 1889.

First Lieut. Ogden Rafferty, Asst. Surgeon U. S. Army, ordered with troops for field practice to Galveston, Texas, where troops will camp for such time as may be hereafter directed. Par. 1, S. O. 29, Hdqrs. Dept. of Texas, San Antonio, Tex., May 13, 1889.

By direction of the acting Secretary of War, First Lieut. James D. Glennan, Asst. Surgeon, is relieved from duty at Willett's Point, N. Y., to take effect June 1, 1889, and will proceed to Ft. Riley, Kan. Par. 5, S. O. 121, A. G. O., May 5, 1889.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Two Weeks Ending May 25, 1889.

Surgeon W. H. H. Hutton, to proceed to New Orleans, La., and inspect unserviceable property. May 25, 1889.

Surgeon George Purviance, detailed as chairman Board of Examiners. May 22, 1889.

Surgeon H. W. Austin, detailed as member Board of Examiners. May 22, 1889.

Surgeon John Godfrey, detailed as recorder, Board of Examiners. May 22, 1889.

P. A. Surgeon John Guitéras, resignation accepted, by direction of the President, as tendered, to take effect April 30, 1889. May 11, 1889.

P. A. Surgeon S. T. Armstrong, granted leave of absence for thirty days. May 11, 1889.

STATE MEDICAL ASSOCIATION MEETINGS IN 1889.

STATE.	SECRETARY'S NAME AND ADDRESS.	TIME AND PLACE.
Colorado.	H. W. McLauthlin, Denver.	Denver, June 18.
Dakota.	H. E. McNutt, Aberdeen.	Mitchell, June 20.
Delaware.	J. E. Ellegood, Laurel.	Dover, June 11.
Maine.	C. D. Smith, Portland.	Portland, June 11.
Massachusetts.	F. W. Goss, Boston.	Boston, June 11.
Minnesota.	C. B. Wetherle, St. Paul.	Minneapolis, June 20.
N.Hampshire.	G. P. Conn, Concord.	Concord, June 18.
New York.	E. D. Ferguson, Troy.	New York, Sept. 25.
Oregon.	C. C. Strong, Portland.	Portland, June 11.
Rhode Island.	G. D. Hershey, Providence.	Providence, June 13.
Vermont.	D. C. Hawley, Burlington.	Brattleboro, June 27. Burlington, Oct. 10.
Virginia.	L. B. Edwards, Richmond.	Roanoke, Aug. or Sept.
West Virginia.	J. L. Fullerton, Charlestown.	W. Sulphur Springs.